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## PHARMACY OF THE FORTNIGHT.

We open this number (page 3) with a dissertation on Aromatic Waters which will commend itself to the pharmacist.

The Borax Industry in America (page 4) is of some historical interest as showing how from importers of borax and boracic acid we have come to be exporters.

Parlor Magic and the Status of the Military Pharmacists in the Armies and Navies of the Leading European Countries (page 5) are both continued from our last issue.

The department of Pharmaceutical Progress (page 6) includes many notes of interest, both practical and scientific, and chronicles the advent of several new remedies, among which are Phenosuccin and its salt Sodium Phenosuccinate, Amygdophenin, Phospherergot and Fer Cremol.

Dr. Chas. O. Curtman of St. Louis has favored us with his report (page 8) to the Pharmacopœia Committee on the Chemical Composition of Bismuth Subnitrate.

Wrinkles in Dispensing (page 9) embraces a number of notes on various topics, each of value to the dispenser.

Professor J. U. Lloyd's paper on Distilled Water (page 10) has that value which always attaches to his work.

Prescription Statistics are made of much value (page 11) to the manufacturers of proprietary medicines by the publication of the names of the articles prescribed.

Dr. Alfred R. L. Dohme and Hermann Engelhardt presented a paper at a recent meeting of the Philadelphia College of Pharmacy on Kola Nuts, which we publish on page 10, and on the same page Alexander Gunn contributes a note on a Fluorescent Constituent of Calumba.

Chinese Opium has been studied by Frank Browne, acting Government analyst at Hong Kong, and we present (page 13) the conclusions arrived at.

An Ingenious Fraud and Dining on Bouquets are two interesting notes on page 14.

The Studies on Cherry Bark by Dr. A. R. L. Dohme and Hermann Engelhardt, the first records of which appeared in this journal, on page 251 of the volume just closed, have been prosecuted still further, and the results are set forth at length on page 15.

The Jaborandi Leaves of Commerce have been further studied by E. M. Holmes (page 17), who tells of their botanical origin.

## THE OUTLOOK FOR THE JOBBER.

**THE DENVER PLAN.**

The jobbing drug trade seem to be a little unfortunate just now, as two of their proposed reforms have not materialized, though at one time both the measures in question seemed almost certain of adoption. The Proprietary Committee of the N. W. D. A. were at great pains to elaborate a plan for the control of the sale of proprietary goods, and this plan received the hearty approval of the Association at Denver. But when it was informally laid before a dozen or so of the largest manufacturers they pronounced the plan not feasible, or at least declined to act under it. By the way, the action of these manufacturers was spoken of by some at the time as being the action of the Association of Manufacturers and Dealers in Proprietary Goods. This was an error, as the plan was not laid before that body. It was merely submitted to an informal meeting of a few large manufacturers with the object of eliciting their opinions. Those opinions were so unfavorable that the plan was not formally presented to the Association for consideration.

**THE BOX AND CARTAGE CHARGE.**

The question of charging for boxes and cartage was then taken up with every apparent prospect of success. The committee having the matter in charge visited the principal Eastern cities, and after being duly wined and dined returned to their respective homes, leaving the trade under the impression that the charge was to be inaugurated promptly on January 1. The retail trade, however, seemed no more anxious to co-operate with the jobbers in this measure than were the proprietors on the Denver plan. It would probably have gone through, however, but for one Boston firm which has declined to enter this convention, just as it has declined to enter other conventions subscribed to by other jobbers. It remains to be seen whether this recalcitrant firm can be brought into line, for if it is not there is little hope for the inauguration of the charge.

**WHY THIS AGITATION?** It is a significant fact that two such important measures should be undertaken almost simultaneously by the jobbing trade, and that both of them should have proven to be failures. The cause of their being undertaken and the cause of their failure seem to lie in the changing conditions of trade. It is not without interest to know that there are fewer wholesale druggists in business now than there were ten years since. This of itself is an indication that the natural growth which should have made the increase in the number of jobbers commensurate with the increase in the number of retailers, has been offset by the development of unfavorable conditions. The jobbing druggists have been compelled to seek some means of counterbalancing these unfavorable influences, and the Denver plan and the effort to introduce a box and cartage charge are but two of the methods which have been essayed for this purpose, though they are the most important which have been undertaken by the N. W. D. A.

**JOBBERS AS MANUFACTURERS.** These are not the only methods which have been tried by the jobber, for a survey of the field shows that the purely jobbing trade is by many being subordinated to their interests as manufacturers, while others who have not yet reached this stage are quietly but effectively making their way toward it. The question, "Must the middlemen go," will apparently be answered by a compromise. We must have middlemen, but it seems that we must either pay them more for their services than we are paying them, or we must expect them to become manufacturers as well as middlemen.

## A MULTIPLE BOARD.

**DO THE STANDARDS VARY?** It is charged that the standards adopted by the four different boards of pharmacy in New York State vary materially, with the result that applicants of limited attainment select the easiest board, pass their examinations before that board, and on the strength of the certificate so obtained demand registration at the hands of the other boards of the State. So far we have seen no equable and feasible solution of the difficulty suggested, and would therefore suggest in rough outline a plan which if it were adopted would meet most of the objections which have been raised to the existing conditions.

**A CURE FOR THE EVIL.** Let there be what might be termed a multiple board, formed by the consolidation of all four of the existing boards, and have the members for each of the four sections of the board be selected in the same way as at present. Let the entire board formulate rigid and clearly defined standards for three grades of certificates, for which three different prices should be fixed, and have the law so framed that only holders of a first-class certificate could open or conduct a drug store in cities having a population of —— or over, while assistants in such cities should be required to possess at least a second-class certificate. Holders of second class certificates should only be permitted to open and conduct stores in, and holders of third class certificates should be permitted only to act as assistants in, cities of less than the specified population.

The minimum size of the city in which first-class certificates should be required, as well as other details, could be determined by conference between the existing boards, and any bill which has the united support of the four boards of the State would have but little opposition in the Legislature.

## SUPPLYING MEDICINE FOR CHARITY PATIENTS.

**TABLET TRITURATES FOR THE POOR.** Our North Carolina correspondent tells in our news columns how the vexed question of supplying the poor of Raleigh with medicines has been determined. The druggists of that city are to be ignored entirely, and a physician employed at a salary of $800 per annum, for which he is not only to attend the poor, but is also to furnish them with the medicines required.

When the physicians prescribed and the city paid for the medicine there was much complaint of the expensive character of the medicines ordered. Now we learn that tablet triturates and compressions are to be used, to the exclusion of any other form of medication. In justice to the physician selected for the office it should be borne in mind that, so far as we are aware, he has not been accused of ordering expensive medicines at any time, and it is quite possibly merely a coincidence that a physician has been selected who believes in tablet triturates.

The Raleigh local Druggists' Association protested against the change of system to the extent of appointing a committee, consisting of J. Y. MACKAE, JAS. I. JOHNSON and J. H. BOBBITT, to wait on the city fathers and speak in behalf of the retail druggists.

This committee, however, did not appear directly before the board, deeming it useless, as they had ascertained that the physicians had had their plans "cut and dried" long beforehand.

## THE MEASURE OF THE DRUGGIST'S RESPONSIBILITY.

THE responsibility assumed by the retail druggists in selling drugs is fully recognized even where no legal restrictions are placed upon the practice of pharmacy. This is very clearly shown by the fact that though there is no pharmacy law in Indiana the Court of Appeals of that State has established the following law in the case of JARVIS HOWES *et al vs.* ROSS, recently delivered in that State:

1. One engaged in the sale of drugs is held to a special degree of responsibility, and the care required must be commensurate with the danger involved, and the skill employed must correspond with that superior knowledge of the business required by law.

2. Drugs sold in small quantities from broken packages affords a vender opportunity of seeing, knowing and determining the character of the drug, and if guilty of negligence in making the sale, he must respond in damages.

3. The mere sale of the wrong drug by a vender does not establish a *prima facie* case of negligence, and where he may have taken every precaution required of him by law, the absence of a finding of facts constituting negligence is insufficient to support a special verdict in favor of one damaged by the purchase and use of the wrong drug.

## WRITE TO YOUR CONGRESSMAN.

**THE MILITARY PHARMACIST.** Ex-Speaker CRISP of Georgia has introduced into Congress the bills for the reorganization of the pharmaceutical service in the United States Army, the United States Marine Hospital Service and the United States Navy, which were printed in the AMERICAN DRUGGIST for October 10 and November 25, 1895. These bills are modest in their demands and should pass without any opposition. Each of our readers can aid in securing their passage by addressing at once a personal letter to his Representative in Congress, asking him to support H. R. bills 1662, 1663 and 1664 (for so they are known), and to the Senators from his State, asking them to support the same bills, which have been introduced into the Senate by Senator Bacon of Georgia. The bills give the pharmacist in the army the rank and pay of sergant major, and in the navy that of a warrant officer.

Hon. Amos J. Cummings, former chairman of the Committee on Naval Affairs of the House of Representatives, writes us: "I am in favor of the bills. · · · I shall do all I can to secure their passage."

*Written for the*
*American Druggist and Pharmaceutical Record.*

## AROMATIC WATERS AND THEIR PREPARATION.

Each succeeding Pharmacopœia brings with it some change in the mode of making aromatic waters. The Pharmacopœia of 1870 recommended the use of magnesium carbonate as an absorbent medium, and as far as appearance and aroma of the freshly prepared waters were concerned this mode left little to be desired; but the waters so made did not keep well and were objected to on account of the small amount of magnesia that remained in solution.

### MAGNESIA OBJECTIONABLE.

Magnesia was discarded in the Pharmacopœia of 1880, its place being taken by absorbent cotton, as suggested by Professor Remington. But this failed to give the satisfaction that was expected of it, and again in the Pharmacopœia of 1890 we find another change and absorbent cotton abandoned, and precipitated calcium phosphate recommended in its place. Of the three we must confess to a preference for the calcium, but even by this process the waters so made sometimes develop organic growths and decompose. From time to time we have seen various recommendations in regard to the best methods of preventing these changes. The value of talcum as a neutral absorbent agent is strongly urged by some, and paper pulp has also had its advocates. But all of the methods hitherto proposed have been open to the same objection—that the waters so made do not keep.

The same is true, but not to so great an extent, of waters made by distillation. Aqua Cinnamomi made from bark deposits a brownish resinous substance which contains cinnamomic acid. Even distilled water is apt to go wrong. Speaking of aromatic waters, attention is expressly called to the fact that none but distilled water should be used.

### DISTILLED WATER SHOULD BE USED.

We find the statement made—and it is needed—that in the making of aromatic waters distilled water should be used in preference to ordinary water when prepared by any other means than distillation. There are many pharmacists, however, who do not heed this precaution, whether they use distilled water in their prescription work or in making their preparations. In one pharmacy visited recently the water bottle, or what passed for it, was seen to contain a thick brown deposit. We asked the proprietor as to the uses to which the fluid was to be put, and he told us it was water that he was preparing to make silver solution with; that he added a small amount of silver nitrate to the water and allowed it to stand a few days and then filtered off the deposit. He evidently had gotten his idea from some photographer, for this is a common practice among photographers. But while well enough in a photograph gallery, it is very poor practice in a pharmacy.

In these days of hypodermic medication the pharmacist cannot be to particular as to the character of the water he uses. Not only should distilled water be used for making hypodermic solutions, but the water should be carefully sterilized before using. This, however, is a digression.

Among the older processes recommended for preparing aromatic waters we would like to state our preference, for paper pulp, with which to absorb the oil, and the use of warm (but not hot) water. This is an easy way of preparing the ordinary aromatic waters in any quantity wanted for immediate use; but waters so made do not keep well, and soon lose their aromatic properties.

Paper pulp is indeed a handy thing to have in the laboratory, and being unobjectionable from a chemical standpoint is elegant for use in preparing elixirs.

### DISTILLED WATERS DON'T KEEP.

The process of distillation has long been recommended as the best with which to prepare aromatic waters, but we have not found that waters made by distillation from the drug itself are notable for their keeping qualities, and in the case of a few waters the process is inadmissible, as in those of lemon and orange, as sometimes called for.

As mentioned above, cinnamon water when prepared from the drug by distillation throws down a precipitate and soon deteriorates. Peppermint water will also be found to be unsatisfactory when made by distillation from the drug. Why this is so we cannot tell, but this has been our experience.

The new Pharmacopœia has adopted stronger rose water and orange flower water in place of the formula given for the production of these waters in the preceding revision. These are made largely in Europe, many times as a by-product in the manufacture of the oils of the flowers. These waters are very much finer than any that can be made from oil rose or oil orange flowers. In this country it is impossible for the pharmacist to prepare his orange flower water from the flowers, and he must depend on the importing houses for his supply; but the fact remains that any pharmacist who will take the pains to gather the fresh rose petals and distill them himself need have no cause to be ashamed of the rose water so made. While those waters (orange and rose) of the new Pharmacopœia are all that can be expected as far as perfection of product is concerned, the directions given for keeping them are extremely unsatisfactory. We have had occasion during the past five years to handle several hundred gallons of imported waters of this kind, and we have found that in order to conserve them it was essential that the solutions should be exposed to the air and be loose stoppered. We recall two demijohns of rose water bearing the well-known label of Schimmel & Co., Leipsic. Two demijohns which had been kept in the cellar tightly corked for two or three months, when opened for use had but little of the odor of rose water, being musty and disagreeable; but a few days' exposure to the air brought them around all right until they were again the elegant products that we expected. This is also true of orange flower water, and we are of opinion that it is true more or less of all waters. A prominent importer wrote us recently in answer to a complaint about a copper of rose water being spoiled on arrival: "Leave cork out of copper for several days and water will be all right. We never do this ourselves, but it is a general practice among some importing houses to do so." It is all a mistake to cork them tightly, and leave them so. We do not wish to be understood as recommending that the cork be left out altogether, but that it be left out occasionally to allow a certain amount of aeration. It is a practice with some pharmacists to make both rose and orange flower water from the oils, but this cannot be too strongly condemned, for they do not keep and are not comparable in any way with the distilled waters made from the rose petals or orange flowers. Waters of this kind if made by distillation keep indefinitely.

### DETERIORATION WITH AGE.

It is an easy matter to prepare an aromatic water that will have the desired aroma while fresh, but to prepare one that will retain its odor and freshness is another question. This has been a troublesome question with most pharmacists. Many have adopted the plan of distilling all aromatic waters except lemon and orange, and this has our strongest approval. We follow the practice invariably, using a considerable excess of oil. The oil passes over with the water, and when first distilled is milky with oil, but on standing the oil rises to the top or sinks to the bottom, according to its weight, leaving the water bright and clear and very fully flavored with the oil. This process is also followed in making camphor water. When desired for use it is drawn off with a siphon rejecting the first small amount that comes over. Waters so made and stored with an excess of the active ingredient keep perfectly and leave nothing to be desired as to aroma.

In England and on the Continent aromatic waters are much more largely used than in this country, and much more attention is given to their proper preparation. In England it is a common practice to prepare aromatic waters from the so-called concentrated waters. This practice has never gained any headway here, and we have no opportunities of examining these concentrated waters, so can express no opinion in regard to their value. The claim is made for them that one part of stronger or concentrated water mixed with 40 of distilled water produces a pharmacopœial aromatic water.

### BY MACERATION.

In the "Chemists' and Druggists' Diary," some years ago, it was recommended to prepare aromatic waters by shaking an excess of the oil dissolved in alcohol with distilled water and allow the excess of oil to separate by standing, and when desired for use to draw off with siphon as directed above. The formula recommended was:

| | |
|---|---|
| Essential oil | fl. ʒ vj |
| Alcohol | fl. ʒ iv |

One ounce of this added to ½ gallon of distilled water and the whole allowed to remain at rest and the excess of oil allowed to separate. This process is satisfactory enough. Waters so made will be found much superior in flavor and keeping qualities to any in which an excess of oil is not used.

There is a considerable excess of oil ordered in the formula, and it is contended by some that this is only a waste of oil. But in our opinion this amount of oil makes a better water in every way than when less oil is used. Why this is so we cannot explain. Most oils are complex mixtures and not simple substances, and the constituents giving most character to the water are present in small quantities or pass into solution with difficulty. The proportions of this formula have been used with satisfactory results in the preparation of waters by distillation, as above.

*Written for the American Druggist and Pharmaceutical Record.*

## THE BORAX INDUSTRY IN AMERICA.

Two names and two events stand out pre eminent in the history of the borax industry in America. These are the detection, on January 8, 1856, by Dr. John A. Veatch, of borax in the waters of a spring 8 miles east of Red Bluff, Cal., and the discovery of Teel's Marsh by F. M. Smith, in the fall of 1872, about 10 miles from Columbus, Nev. The borax found in the spring water by Dr. Veatch was the first borax discovered in America, while from Mr. Smith's discovery dates the era of cheap and therefore popular borax.

In the waters of the spring in which Dr. Veatch detected the presence of borax there was not a sufficient quantity of the salt to warrant its use as a source for the article on a commercial scale, but further investigation convinced the doctor of the presence of borax in both springs and lakes in different portions of California and in company with Col. Joel Lewis, a famous bear hunter of Sacramento, Dr. Veatch set out to hunt for a mountain of "a white pulverulent substance," and of a rivulet of water which was totally unfit to drink, and of an Irishman who knew of a borax lake, all of which he had heard of through Charles Fairfax and Colonel Lewis. The mountain turned out to be a big bank of sulphur, the borax lake was merely a lake of salt, and the Irishman alone was genuine.

### THE FIRST PRODUCTION OF BORAX IN AMERICA.

In the course of the journey, however, under the guidance of a Mr. Hawkins, the doctor came upon 200 acres of mud redolent of sulphureted hydrogen and soapy with the presence of alkali. From this lake was taken the first borax ever produced on a commercial scale in America. The water at an average stage contained 0.039 per cent. of solid matter in solution, of which 61.8 per cent. was sodium carbonate, 2.4 per cent. sodium chloride and 17.8 per cent. sodium biborate. Shortly after Dr. Veatch's visit very large crystals of borax were found, some of which measured from 5 to 7 inches in length, green in color and very perfect in form. Dr. Veatch formed a co-partnership with Dr. W. O. Ayers, and a coffer dam being sunk, a large quantity of the crystals was secured. Borax was also obtained by sinking a well in the mud and evaporating the water thus obtained. At this time—in 1856-57—borax sold at 50 cents per pound, wholesale. As extracted from this lake it could be laid down at 3 cents per pound in San Francisco. In 1864 a company, under the superintendence of Dr. Ayers, began the manufacture of borax, and the value of the output rose to about $132,000 annually. At the end of four years, however, the lake was ruined by flooding from an artesian well the flow of which the miners were unable to check.

Another lake of the kind known as Hachinhama was discovered in the same locality, Lake County, but the sodium carbonate was in such large excess that it was necessary to crystallize it with the borax and afterward wash it out.

### CALCIUM BORATE IN NEVADA.

In 1872 deposits of calcium borate, ulexite, or as it was locally known, "cotton balls," were found in Nevada, and this salt was brought in in large quantities and mixed with the waters of the Hachinhama lake, when a double decomposition occurred between the sodium carbonate and the calcium borate resulting in the formation of sodium biborate and insoluble calcium carbonate, but the Nevada miners had the advantage, since they found dry borax and borates in the crude state in places very easy of access, and the prices of the product fell rapidly.

### F. M. SMITH DISCOVERS TEELS' MARSH.

In the fall of 1872 F. M. Smith, now president of the Pacific Coast Borax Company, was engaged in prospecting in the neighborhood of Columbus, Nev. Mr. Smith had been following mining camps from Montana to Idaho, and from California to Nevada, since April, 1867, and like all prospectors had accumulated a number of mining claims and resorted to various expedients to make a livelihood pending the development of these claims. Just before he discovered Teel's Marsh, Mr. Smith had purchased a wood ranch and erected thereon a comfortable little shanty commanding a view of what he found afterward to be the rich borax deposit in Teels' Marsh.

An alkali marsh does not resemble what is known in the East as a marsh, for it is not watery and not necessarily of soft consistency, as it is composed of a dry lagoon or surface incrustation of alkali of some kind, either soda, salt or borax. The surface varies from light grayish to white in appearance, often covering large areas.

One day Mr. Smith observed the white incrustation on Teels' Marsh, and taking two of his choppers with him he visited the marsh and found a heavy incrustation, which upon assay proved to contain a very large proportion of borax. Hurrying back, he located as large an area of the marsh as he possibly could. Up to this time borax lands had been located under the saline laws of the State, under which one locator could take up 160 acres; but a change was made in this respect so that no one individual would be allowed to take more than 20 acres. It was therefore necessary to secure the co-operation of a number of persons who would allow their names to be used as locators, and some of these people after having had their entries made declined to give up their interests upon the terms originally agreed upon, and as a result of this their claims had to be bought up at considerable cost.

### JUMPING A BORAX CLAIM.

At one time seven locators came onto the marsh and took forcible possession with guns in their hands, and eventually had to be ejected by the courts. At this time the price of borax was 30 cents per pound, wholesale, and was little known save to druggists and blacksmiths, and was retailed by druggists at 25 cents per ounce. The total consumption in the United States reached hardly more than 600 tons per annum. F. M. Smith and his brother erected an extensive plant for the purification of borax on Teels' Marsh, and this has been worked almost continuously ever since, and the output from this plant has almost controlled the market since it was put into operation, though the price had declined from 30 cents to 10 cents per pound before the Smith Bros. succeeded in getting their product on the market.

### BORAX FROM THE MINES.

For a long time it was supposed that the alkaline incrustations and deposits were the only forms in which borax existed, but while working the Death Valley borax deposits, a stratum of calcium borate in crystalline form was found near the silver mines of the Calico Mountain. This material occurred in a well defined layer or vein which was found to average nearly 6 feet in thickness. This form of calcium borate was named "colemanite," in honor of W. T. Coleman, the leader of the San Francisco "Vigilantes," who had been associated with F. M. Smith in his business ventures leading to this discovery. The Death Valley deposit was worked for a time only, because on account of its inaccessibility and the absence of suitable fuel it could not be worked profitably at the prevailing low prices of borax.

The Calico borate of lime mines have taken the place of the marsh deposits, and now furnish the chief source of supply, the marsh product constituting but an insignificant fraction of the total Pacific Coast product.

### THE CONDITION OF THE INDUSTRY TO-DAY.

The three forms in which borax has been most plentifully found are tincal, or crude crystalline borax, this name being that applied to the same article in the East; ulexite, or calcium borate, commonly known in the borax region as "cotton balls," and crude borax, or sodium borate in a granular condition, such as is found in Teels' Marsh, although "cotton balls" are also found in Teels' Marsh. The deposit in the borax mines in the Calico Mountains consists of calcium borate in stratified formations, differing in its characteristics from that existing in the cotton balls, and, as stated above, this deposit in the Calico Mountains is termed "colemanite." While these are the principal forms in which borax occurs, the report issued by the California Mining Bureau states that 22 natural borates have been found. One of these, a calcium borate, named hayesene, is found at Bergen Hill, N. J.

### WORKING COLEMANITE.

The crude calcium borate, or colemanite, is hauled from the mine from which it is obtained in the Calico Mountains to Daggett, where it is shipped by the carload to Alameda. At this point there is a factory embracing three buildings, three stories high, covering nearly 26,000 square feet of ground, and two one-story buildings covering about 15,000 square feet. Here the crude calcium borate is fed into a breaker, whence it goes into a mill and is ground up into a very fine smooth powder. At the same time sodium carbonate, obtained by solar evaporation from the water of Owen's Lake, Inyo County, Cal., is also powdered and the two salts are dropped into iron boilers filled with water and provided with stirrers and heated by steam coils. Double decomposition occurs, resulting in the formation of sodium biborate, which remains in solution, and calcium carbonate, which is precipitated.

The solution is then run off into crystallizing tanks and the precipitate remaining in the boiler is thoroughly washed to obtain all the borax adhering to it. The borax obtained by this first crystallization is slightly objectionable in color and has to be recrystallized to make it absolutely pure. The mother liquor is run back into the boilers and

utilized in the further decomposition of calcium borate and sodium carbonate. The impure borax from the crystallizing tanks is dissolved and the solution run into vats which are between 5 and 6 feet deep and about the same in diameter. In these tanks stout wires are suspended and the borax crystallizes out on these wires from the hot solution. These crystals are pure and adapted to general use. They find their way into commerce in crystal form as "refined" borax, and pulverized as "powdered refined."

The crystals forming on the bottom of the tank are somewhat impure and are used in the arts such as blacksmithing, etc. In the factories at Columbus, at Teels' Marsh and at Rhodes' Marsh "cotton balls" are used instead of colemanite, but the chemical processes are the same as in the factory at Alameda. At the three former factories the boiling is done in open vats and the stirring is generally done by hand. At Rhodes' Marsh and at Columbus the vats are heated by steam. There are also small outfits around the Columbus, Teels' and the Fish Lakes marshes. The marsh at San Bernardino produces only sodium biborate and not calcium borate. It is therefore only necessary to make a solution, which is done by boiling the crude borax with water by the means of crude petroleum, allow it to settle and draw it off into large cement vats, and here it cools and crystallizes out. The borax thus obtained, however, requires another crystallization before it can be placed upon the market. Although the San Bernardino Marsh is 70 miles from any railway the works are admirably designed and models in mechanical construction.

OTHER SOURCES OF BORAX.

Borax has been utilized by man since very great antiquity, though its early history is vague and indefinite. Borax was largely used by Nero, and Panza "deeply regretted that he was not rich enough to buy borax to cover the arena after the fight between Lyden and Tharides." M. Fourcroy stated, in 1790, that "we get this salt from the East Indies," and it seems that in Thibet there exists a series of lakes somewhat resembling those in California and Nevada, and it is from the opaque crystals obtained from these lakes that we get the name of tincal for the crude borax crystals. In 1742 Targoni Tozzetti discovered the presence of chasms in the vicinity of Castelneuova from which heated vapors escaped and upon investigation he found pools containing solutions of boracic acid. Attempts were made to utilize these solutions, though with only a moderate degree of success until, in 1827, François Laradrel hit upon the expedient of arranging a series of vats or pools in a line down a hillside, so that the vents for the subterranean gases were in these pools thus utilizing the subterranean heat for the concentration of the acid solution. For many years this was the principal source of supply of borax for Europe and the United States. In 1836 a double calcium borate was found at Iquique, in South America, and large deposits have since been discovered in the Island of Potosia and Bolivia. In 1870 deposits of borates were also discovered on the Tchinarsalva, about 40 miles from Panderma, on the Sea of Marmora. These deposits are now being worked by a British company under concessions from the Turkish Government.

THE USES OF BORAX.

The uses of borax are constantly increasing both in number and in importance. In the old days when borax sold at 50 cents a pound its use was confined almost exclusively to the blacksmith and to the very small quantities then utilized in medicine. Probably its largest use now is as a meat preservative, and probably its largest use in the future will be as a household article for general cleaning and toilet purposes. It has very many advantages in both these directions since it is much more powerful as a preservative than almost any other non-toxic salt that could be utilized in this connection, while as a cleansing agent it is much cheaper than soap, because it is so much more efficacious and is much more agreeable and more generally available than sal soda. The uses of borax in the household and in household medicine are so numerous, however, that it is almost impossible to name them all. Among its great advantages is that it is not poisonous to man. It is therefore more safe as a disinfectant than is carbolic acid, ferrous sulphate, copper sulphate, corrosive sublimate or chloride of lime. It can be more safely added to water to soften it than can ammonia.

THE WORLD'S CONSUMPTION.

It was estimated in 1892 that the world's output of borax amounted to 23,000 tons annually, obtained from the following sources:

| | Tons. |
|---|---|
| Asia Minor | 9,000 |
| Thibet | 2,000 |
| Italy | 3,000 |
| Chili and Bolivia | 3,000 |
| California and Nevada | 6,000 |

The rapidity with which the use of borax has increased is marvelous, for competent authorities reckon the Pacific coast output for 1875 to have been 2,500 tons; 1885, 3,700 tons, and 1895, 6,700 tons.

Manifestly the use of borax is but in its infancy, and we can confidently look forward to a continuous and rapid development in the demand for it.

## PARLOR MAGIC.

(*Continued from page 373, Volume XXVII.*)

THE HUMOROUS EGG.

In a quill place a small quantity of quicksilver, and, having fastened it well in, insert the quill through the end of a newly boiled egg. The egg being placed on the table will dance about until cold.

A LIQUID PRODUCED BY TWO SOLIDS.

Rub together in a dry mortar equal portions of ammonium carbonate powdered and blue vitriol powdered; these will yield a blue liquid. A colorless semi-liquid may be obtained by rubbing together equal parts of sodium sulphate powdered and lead acetate.

TO PRODUCE FIRE FROM TWO LIQUIDS.

Take 1 ounce of turpentine and ½ ounce of nitric acid, with a few drops of sulphuric acid in the nitric acid.

*Directions.*—Pour the turpentine into a saucer, then add carefully the nitric acid. It will immediately burst into flame.

THE MYSTERIOUS BOTTLE

will make many wonder "how it's done." The bottle (2 ounce or 4 ounce) is fitted with a perforated cork and bent glass tube, reaching to the bottom. Half an ounce of ether is put in and the bottle is filled up with water. If the bottle is put into hot water it will immediately begin to empty itself; if it is then put into cold water it will begin to fill again.

*Note.*—Care must be taken with the experiments with ether, as its vapor is very inflammable.

THE SEA ON FIRE.

*Materials required.*—A soup plate, some potassium and naphtha, and a few paper ships.

*How to proceed.*—Fill the plate with water, pour a little naphtha on the water, then place the ships in position. Now make such a remark as, "I am now about to burn the fleet of King Tim Buck Too, the King of the Cannibal Islands." Throw a piece of potassium into the plate, and you will have a fleet on fire. Potassium and sodium are light, soft metals which have so strong an attraction for oxygen that they will separate this element from its combination in water and unite with it so violently as to burst into flame. The conflagration may be extinguished by covering with a second plate.

THE DANCING FIRE BALL.

*Directions.*—Procure a stout and tolerably wide test tube. Place into it a teaspoonful of powdered chlorate of potash and heat over a spirit lamp. When it is liquefied and begins to boil drop into it a piece of charcoal about the size of a pea. It will immediately begin to glow and will dance about on the surface of the liquid as if alive.

## PHARMACISTS IN THE ARMIES AND NAVIES OF THE LEADING EUROPEAN STATES.*

VIII.

### Switzerland.

During peace there are no military hospitals in Switzerland, nor has Switzerland a standing army in the sense in which the term is used in Germany. Universal military service is indeed strictly enforced, but the military exercises are confined to periods of a few weeks.

Those who become sick receive their medicine from an ordinary pharmacy and medical treatment in ordinary hospitals with which contracts have been made.

THE PEACE ESTABLISHMENT.

Therefore only one professional military pharmacist is employed in Switzerland, viz., the Staff Pharmacist with the rank of a major.

He is at the head of the military pharmaceutical affairs in peace and in war, and is the technical adviser of the highest medical authority in the army, the Chief Field Surgeon of the military department.

He agrees upon the military medical tariff with the Swiss Pharmaceutical Association, and submits it to the Chief Field Surgeon for his approval. He is

* Translated from the *Pharmaceutische Zeitung*, by Otto Hoffmann, A.B., under the direction of Dr. Geo. F. Payne, chairman of the Special Committee of the A. Ph. A. appointed at the Asheville meeting to work for the fuller recognition of pharmacists in the army and navy of the United States. The publication of the series was begun in this journal for September 10 and so far there have appeared descriptions of the position of the pharmacist in the German army (September 10), the German navy (September 25), the Austro-Hungarian service (October 10), the Italian service (October 25), the French service (November 25), the Russian service (December 10), and the English service (December 25).

the expert for the examination of medicines that are delivered, of medical bills, and for chemical examinations. He also has some other duties.

THE PHARMACEUTICAL DEPARTMENT ON A WAR FOOTING.

Provision has been made for the calling together of a sanitary force in case war should occur. This force is organized as follows:

1. Sanitary officers, divided into (*a*) surgeons and (*b*) military pharmacists.
2. Sanitary forces, divided into (*a*) non-commissioned officers, (*b*) attendants on the sick and (*c*) carriers of the sick.

In war the Swiss army has the following pharmacists at its disposal: 1 staff pharmacist, 8 pharmacists of camp hospitals and 40 ambulance pharmacists.

RANK OF THE PHARMACIST.

The military pharmacists, who without exception have officers' rank, are prepared in peace in so-called "Schools for the Preparation of Sanitary Officers." The courses in these schools last 34 days. Some physicians are also called to these schools. A special uniform with marks indicating their rank is granted to the military pharmacists. After the military pharmacists have become prepared they are summoned to receive courses with the troops with whom they belong, and must become familiar with their duties in camp hospitals and ambulances.

EDUCATION OF THE SWISS PHARMACIST.

The education prescribed for the Swiss pharmacist comprises graduation from a literary college; then two years practical experience in a drug store and passing an examination entitles a man to be clerk; then one year as clerk and two years of special study at a university, ending with an examination in which, in some respects, more is required than in Germany.

No further special preparation is required of a military pharmacist.

# PHARMACEUTICAL PROGRESS.

**Sedum Camphor.**—Hjelt has extracted from the oil of sedum palustre a sesquiterpene alcohol of the formula $C_{15}H_{26}O$. It presents the greatest similarity to the corresponding patchouli camphor. Weak sulphuric acid converts it into a sesqutiterpene $C_{15}H_{24}$, boiling at 255 degrees. —*Chemiker Zeitung.*

**Distintive Reaction for Sparteine Sulphate.**—A small quantity of the alkaloidal salt is mixed in a porcelain capsule with about one-third its weight of chromic acid and gently warmed; the mass at once turns green from the reduction of the acid and gives off a distinct odor of coniine.—*Journ. de Pharm. d'Anvers*, li., 223. *Phar. Jour.*

**Phenosuccin** has been prepared by A. Putti (*Oester. Zeit. f. Pharm.*) by the action of succinic acid on paramidophenol, and recommended by him as an antipyretic and antineuralgic. It forms colorless needles, melting at 155 degrees; difficultly soluble in cold water, a little more soluble in hot water (1 to 83), and insoluble in ether.

**Fer Cremol** is a brown, almost tasteless powder, soluble in very dilute ammonia water, with a fine red color, without residue. It contains 3 per cent. of iron. The dose is from 3 to 8 gr. three times a day, after meals. Its therapeutic indications are the same as for the large number of similar organic iron compounds recently introduced.

**The insecticide efficiency of paris green** depends upon the amount of arsenous acid present, which is somewhat variable, ranging from 54 to 61 per cent. In an analysis of five samples obtained in the market the chemist of the Maine State college experiment station found 54.61, 55.39, 54.70, 55.84 and 40.86 per cent. of arsenous acid, respectively. The other constituents were not determined.

**Gilding Glass and Porcelain.**—According to a French authority, much better and more brilliant results may be obtained from the following than from the simple gold chloride ordinarily used: Mix 900 parts of lavender oil, 100 parts of gold chloride, 5 parts of bismuth subnitrate and 50 parts of chrome green; apply on the surface to be gilded, allow to dry, and then heat in a muffle furnace.

**Kosotoxin.**—This body is an active principle of Koso flowers. It is a yellowish amorphous powder, according to Leichsewring, melting at 80 degrees, to which the provisional formula $C_{26}H_{34}O_{10}$ has been assigned. It is soluble in alcohol, ether and chloroform, and has a considerable physiological action. It is a strong muscle poison, but has very little action on the central nervous system.—*Apotheker Zeitung.*

**Sodium Phenosuccinate** is the sodium salt of the phenosuccin mentioned above and is prepared by the same author, A. Putti (*Oester. Zeit. f. Pharm.*), by warming succinamin with soda solution. It forms a white powder, readily soluble in water. It is to be preferred to phenosuccin itself from a therapeutic point of view, and may be administered in doses of 0.5 to 3 gm. (7½ to 46 grains) as an antipyretic and antineuralgic.

**Fluorol** is a new name for sodium fluoride and has been recently recommended (*Pharm. Post*) as an antiseptic, and which was recently referred to in these columns. It occurs as a bluish white, odorless salt of a saline taste and is soluble in 25 parts of water. It acts as a bactericide in 1 per cent. solutions. It is recommended as an antiseptic for use in ophthalmology in ¼ per cent solutions and is said to be superior to corrosive sublimate, silver nitrate or formol.

**Amygdophenin** is a paramidophenol derivative in which in one of the hydrogen atoms of the amide group is replaced by an ester of amygdalic acid, and the hydrogen atom in the hydroxyl group is replaced by ethyl carbonate. It was first prepared by Hinsberg and Blum and has been commended as an anti-rheumatic by Dr. Stüve of Frankfort (*Wien. Med. Presse*), who administered it in doses of 1 gm. (15 grains) from one to six times daily, in a powder or tablet. Amygdophenin occurs as a grayish-white light crystalline powder, very difficultly soluble in water.

**Gallesia Gorazema.**—According to Peckolt, *Gallesia gorazema*, Moq., grows in all the tropical States of Brazil. All portions of this large tree possess a strong odor, resembling that of a mixture of garlic and asafœtida. The flowers are used by the inhabitants as a remedy for hysteria, etc., in the form of a tincture or a fluid extract, and for ascarides, mixed with a mucilaginous vehicle, as an enema. The fresh and bruised flowers and leaves are applied to the skin instead of mustard plasters. An infusion of the leaves, and buds of the same, are employed in dropsy.—*Pharm. Rund.*

**Method of Preparing Bone Marrow.**—Three ounces of fresh bone marrow (as much red as possible) are made up into a paste with port wine, 1 ounce; glycerin, 1 ounce; gelatin, 5 drams. A little care is required in making the paste, to keep the gelatin and the marrow sufficiently fluid for them to be thoroughly mixed. The gelatin should be soaked in sufficient water to soften it, and then should be melted with the glycerin, the mixture being kept in a mortar previously made hot with boiling water, while in another mortar, made hot in a similar manner, the marrow and wine are mixed. Then the contents of the two mortars should be thoroughly incorporated and allowed to set.

**New Variety of Ergot.**—There has recently been received in the London market an importation of a few hundredweights of ergot, which was grown in the Canary Islands and exported from Las Palmas. It is believed to be the first that has reached this country from those islands. In appearance it is more slender than the Russian ergot, and somewhat longer as a rule. It has been examined by J. C. Umney, who finds that it yields a larger amount of extractive than the Russian and Belgian varieties, and is quite equal to an average sample of fine Spanish ergot. A specimen of the drug has been presented to the museum of the Pharmaceutical Society of Great Britain. —*Phar. Jour.*

**Preparation of Potassium Ferricyanide.**—To a warm concentrated aqueous solution of potassium ferrocyanide C. Bech (*Zeit für agew Chem. through Pharm. Review*) adds an aqueous solution of ammonium persulphate so that the reduction product will separate upon cooling in the form of a crystalline precipitate of potassium ammonium sulphate. One kilogram of potassium ferrocyanide is dissolved in

1 kg. of hot water and the solution allowed to cool to 60 degrees C. To this liquid a cold solution of 270 gm. of ammonium persulphate in 500 gm. of water is gradually added, the mixture being cooled at the same time. Under these conditions the potassium ammonium sulphate will crystallize, whereas the ferricyanide remains in solution. The process is patented in Germany.

**Phosphergot** is the generic name given to a mixture of sodium phosphate and ergot, recommended in general debility. It appears in the following three modifications: The variety intended to be taken as a mixture (in sweetened water) contains 1.5 gm. (23 grains) of sodium phosphate and 1 gm. (15 grains) of powdered ergot; this quantity constituting a daily dose. In the case of phosphergot powder, each dose represents 0.25 gm. (3¾ grains) each of dried sodium phosphate and powdered ergot; and this dose is intended to be taken in the morning on an empty stomach. For pills, the following proportions are used: Dried sodium phosphate and extract of ergot, of each 2 gm. (31 grains); make into 20 pills. Two to four pills to be taken daily.—*Ph. Zt. Merck's Report.*

**Preparation of Sodium Bicarbonate.**—According to E. Carthaus (*Zeit. für Ang. Chem. through Pharm. Rev.*) magnesia or dolomite can be brought into solution as magnesium bicarbonate by acting upon it with carbon dioxide and water under a pressure of 5 to 6 atmospheres, and on this fact he has based the following patented process. If this solution is acted upon by sodium chloride, also under pressure, double decomposition takes place, magnesium chloride and sodium bicarbonate being formed. The latter is largely precipitated, whereas the magnesium chloride, being very soluble, remains in solution. These reactions are repeated separately in suitable apparatus, the materials being forced under pressure from one vessel into the other until the mother liquid becomes saturated with magnesium chloride. The sodium bicarbonate is washed to remove the impurities of the mother-liquid.

**Soluble Ferments and Alcohol.**—A. Dastre shows that soluble ferments are not entirely insoluble in alcohol. (*Com. Rend. Phar. Jour.*) The digestive ferments and those of blood, taken in the dry state, are totally insoluble in strong alcohol, but it is otherwise when the alcohol is mixed with water. Trypsin was found to be very soluble in alcoholic liquor of the strength of 10 to 25 per cent., but less so in 50 per cent. and stronger solutions. The amylolytic ferment is even more soluble, dissolving in 65 per cent. alcohol. The ferments of blood are only slightly soluble, and not at all in solutions containing more than 4 or 5 per cent. of alcohol. The scale of solubility is given as follows: Diastasic and proteolytic ferments of the blood, emulsin, ptyalin, trypsin, pepsin, ferment of gaulterin, amylolytic ferment of the pancreas, and myrosin. Though the ferments specially studied and referred to above may exercise their specific activity in alcoholic media, the presence of the latter is not favorable to such action.

**The Action of Mustard and Pepper on Digestion**—In nearly all experiments dealing with the action of condiments or other like substances on digestion, the work done has been limited mainly to the influence of the substance upon the secretion of gastric juice, or to the effect of the presence of the substance upon the purely chemical process of gastric digestion. Dr. Gottlieb of Heidelberg, however, has recently tried some interesting experiments on the influence of mustard and pepper on the secretion of pancreatic juice. The experiments were conducted on rabbits, a canula being inserted in the pancreatic duct, after which the condiments were introduced into the stomach. The presence of either of the substances in the stomach led to a marked increase in the secretion of pancreatic juice, the volume of fluid being increased three or four times. As might be expected, the juice secreted under these conditions was somewhat more watery than normally, but showed the usual digestive properties on all three classes of foodstuffs.—*Food and Sanitation.*

**Apolysin.**—De Nencki and De Jaworski (*Presse Méd., B. M. J.*) have studied apolysin chemically, physiologically and clinically. Apolysin is really monophenetidin, being allied to phenacetin, as they are both derived from paraphenetidin. The difference between them is that in phenacetin one atom of H in the amide group is replaced by the radical of acetic acid, while in apolysin the same atom of H is replaced by the radic C of citric acid. It is a crystalline, yellowish-white powder of peculiar odor and taste, less acid than citric acid. Its melting point is 72 degrees C. It is soluble in cold water (1 in 25), alcohol, and glycerin, and in concentrated sulphuric acid without change of color. The solution in nitric acid turns a pale orange color in hydrochloric acid, concentrated to 1 dg. for 1 ccm. of acid, warmed and mixed with 10 volumes of water, it turns the color of burgundy wine when a few crystals of chromic acid are added. The aqueous solution is not clouded by silver nitrate, nor the acid solution by sulphide of hydrogen.

**Medicated Gelatin Bougies.**—M. J. Schröder prepares bougies with gelatin, as follows (*Ned. Tijd. Phar. Phar Jour.*): Gelatin, 5 gm., is macerated in water, 25 gm., for a quarter of an hour. Glycerin, 5 gm., is then added, and the mixture heated until solution is complete, when the liquid is strained and again heated until it is reduced to 25 gm. If the medicament is soluble in water, it is dissolved in as little as possible, the solution added to the melted mass, and the whole heated till again reduced to 25 gm. If, however, more than 5 per cent. of the medicament be added, further evaporation of the mass should be avoided. Readily decomposable compounds should be dissolved in a known quantity of water, and that quantity evaporated from the mass before the addition takes place. Bougies containing silver nitrate can thus be obtained both transparent and colorless. When insoluble compounds are to be added, the gelatin mass should be prepared with water only, and the medicament mixed with the glycerin before mixing. Special precautions to be observed when adding alum, tannin, or ferric chloride to the gelatin mass are described by the author, but in such cases it would seem preferable to resort to the use of some other basis. A similar method of preparing the gelatin mass has been found satisfactory for preparing capsules.

**Hydrogen Peroxide.**—A very exhaustive paper on hydrogen dioxide appears in the current number of the *Berichte*, by J. W. Brühl, quoted by the *British and Colonial Druggist.* He places the specific gravity of pure hydrogen dioxide as $d\frac{0}{0} = 1.458$. Spring found it to be $d\frac{0}{0} : \frac{0}{0} = 1.499$. After having distilled some of the body in vacuo an oily residue was left, which Dr. Brühl wished to examine, so he took a drop from a capsule with a glass rod, which he points out was not rounded, but broken off sharp. At the moment of contact, an explosion of such intensity occurred that Brühl describes it as "such as I have never before heard." The glass vessel was driven clean through the table. Beakers and flasks were broken, and a window 5 meters off was smashed. The ether and alcohol in the flasks which were shattered, although not near a gas flame, caught fire. The doctor's spectacle glasses were torn out of the frames, and he was struck with numerous fragments of glass, some of which went through his clothes, and stuck into his body. A complete spectroscopic examination was also made. The chief constants of hydrogen dioxide are given in the table as follows:

| | |
|---|---|
| Boiling point | 68°.3—69°.2 |
| Specific gravity $d^0/_4$ | 1.45 |
| Specific gravity $d^{20}/_4$ | 1.43 |
| Refractive index (sodium line) | 1.406 |

The paper concludes with some interesting speculations as to the constitution of hydrogen dioxide and ozone and carbon monoxide and the valency of hydrogen.

**The Active Principles of Helleborus Fœtidus.**—The true Hellebores, writes M. Sauvan, especially H. *fœtidus*, contain two toxic glucosides, helleborein and helleborin. Helleborein is very soluble in water, slightly soluble in alcohol, almost insoluble in ether, decomposes under the influence of weak acids into glucose and helleboretin. Helleborin is insoluble in water, slightly soluble in ether, soluble in alcohol and chloroform. Weak acids break it up into glucose and helleboretin. The author has made a microchemical examination of the plant in order to localize the active principles as far as possible. Under the influence of strong sulphuric acid, helleborein is colored a golden yellow, gradually changing to red brown. With helleborin the same reagent yields a cherry to violet color. A third non-toxic substance is present which has not been studied. The conclusions drawn are as follows: The root does not contain helleborein. Helleborin appears to be associated with the non toxic substance chiefly located in the cortical parenchyma, but even there only in small quantity. In the stem, helleboreine is found in the first two or three layers of cells under the epidermis. Helleborin appears to be present in the cortical parenchyma. In the leaves, helleborein is found in the petiole, in the epidermal and sub-epidermal layers. The glucoside is most plentiful in the elements forming the concave portion of this organ. In the lamina, the same body is found chiefly in the epidermis. The seed is very rich in the active principles. Helleborein is present in the albumen and the embryo. The two other bodies are present, also, in small quantities.—*Repertoire de Pharmacie.*

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The flaky, lustrous substance which forms on the sides and bottoms of bottles containing magnesia mixture (used as a reagent in the estimation of phosphoric acid) has been found to be similar to talcum in physical properties and almost identical with the mineral serpentine in chemical composition. It is a magnesium silicate.

## Investigations Into the Chemical Composition of Bismuth Subnitrate.*

By Charles O. Curtman, M.D., Ph.D.,

St. Louis, Mo.

It is well known that by treating bismuth nitrate, Bi $(NO_3)_3$, with water very different products of bismuth subnitrate are obtained. The amount of water added, the temperature, the length of time the precipitate remains in contact with the liquid before filtering, the duration of washing and the quantity of water used in that operation, and finally the temperature and time of drying the finished product, all have their influence in producing salts of various compositions. Many of the precipitates are shown by the microscope to consist of minute crystals, so that they may be considered as definite chemical compounds, while some are amorphous. To secure products of uniform composition some Pharmacopœias give careful detailed directions for the preparation, while others leave the choice of the method of preparation to the manufacturer and confine themselves to prescribing tests for purity.

### THE UNITED STATES PHARMACOPŒIA REQUIREMENTS.

The United States Pharmacopœia describes the salts as "of variable chemical composition," and its tests for purity refer to the absence of foreign metals, especially of lead, silver, copper and arsenic, carbonates, sulphate and chloride. The only quantitative tests relating to the proportion of its normal constituents are implied in the description of the salt, which states that when heated to 120 degrees C. it loses water (from 3 to 5 per cent. of its weight), and when subsequently heated to redness it leaves from 79 to 82 per cent. of its weight of a yellow residue. Hence when a salt complies with the tests for absence of foreign materials, a considerable limit is allowed in the relative proportion of nitrate, hydroxide and water.

The larger modern works on chemistry give numerous different formulæ found by recent and older investigators for bismuth subnitrate, together with the conditions under which their formation was observed. Thus Dammer's "Handbook" enumerates nine varieties, Michaelis seven, and in Flückiger's "Pharmaceutical Chemistry" we find three principal formulæ distinguished as $\alpha$, $\beta$ and $\gamma$.

### COMPOSITION OF THE COMMERCIAL NITRATE.

For some time past I had observed that of several specimens received for examination, none corresponded exactly to the proportions demanded by and of the formulæ published, most of them being deficient in acid. Few came within the limits of quantitative proportions stated in the United States Pharmacopœia, which are the same as those of the German *Arzneibuch*, although on qualitative examination they complied with its demands. Of course the mistake of using tinfoil in Bettendorf's test for arsenic, to which I called attention about two years ago,† was avoided, the concentrated solution of stannous chloride being used alone. For the purpose of investigating the subject more fully I procured specimens from some of the principal manufacturers, and determined in them not only the freedom from impurities, but also the loss of water by heating to 120 degrees C., and the amount of residue of bismuth trioxide left on ignition, and lastly the percentage of nitric acid. To facilitate the comparison of results I give the proportions demanded by Flückiger's formulæ. These are: ($\alpha$) Bi O N $O_3$ + $H_2O$ (or as written by others: Bi $(OH)_2$ N $O_3$) representing the salt as first precipitated. ($\beta$) Bi O O H + Bi O N $O_3$, the same salt after protracted washing. ($\gamma$) (Bi O N $O_3)_4$ + $H_2O$, the salt formed by long contact with acid wash water. Also that of a formula containing the salt ($\beta$) with water: (4.) Bi O O H + Bi O N $O_3$ + $H_2O$. Other published formulæ demand a still larger proportion of nitric acid and need not be considered here.

These four contain as follows:

| | Per cent. of water lost at 120°C. | Per cent. of $Bi_2O_3$ after ignition. | Per cent. of nitric acid radical, $NO_3$ |
|---|---|---|---|
| $\alpha$ | = 5.894 | 76.413 | 20.311 |
| $\beta$ | = ..... | 88.101 | 11.709 |
| $\gamma$ | = 1.54 | 80.800 | 21.247 |
| 4 | = 3.286 | 85.206 | 11.324 |

The seven specimens examined were all exceedingly light and voluminous, and would pass muster in regard to the qualitative tests of the U. S. P.

| | Per cent. of loss at 120°C. | Per cent. of residue $Bi_2O_3$. | Per cent. of acid radical, $NO_3$. |
|---|---|---|---|
| 1..... | 4.1 | 82.0 | 10.80 |
| 2..... | 5.9 | 82.5 | 11.45 |
| 3..... | 5.3 | 83.1 | 10.21 |
| 4..... | 3.2 | 85.0 | 9.90 |
| 5..... | 3.1 | 81.2 | 10.53 |
| 6..... | 3.0 | 82.0 | 11.45 |
| 7..... | 3.2 | 81.1 | 10.53 |

For the determination of the nitric acid several volumetric methods were tried on the same sample, and after finding that they gave substantially equal results and agreed well with some colorimetric tests, the following was adopted as the most expeditious for the examinations: 6.189 gm. (corresponding to the molecular value of the acid radical $NO_3$) of the bismuth salt were suspended in 100 ccm. of water at ordinary temperature, a few drops of phenolphthalein T. S. were added, and then normal solution of potassium hydroxide, in small portions, with vigorous shaking, until the red color remained permanent for ten minutes. The number of cubic centimeters of normal solution used directly indicated the percentage of $NO_3$. (If only 1 gm. be taken, the number of cubic centimeters of solution used must be multiplied by 6.189 to obtain the percentage of $NO_3$.)

The results show that Nos. 2, 3 and 4 exceed the limit of residue of $Bi_2O_3$ given in the U. S. P. (and in the German *Arzneibuch*); also that Nos. 2 and 3 lose more water than prescribed. The water lost at that temperature is the more loosely combined water of crystallization, while the separation of the water formed from the hydroxide requires a higher temperature.

### THE COMMERCIAL SALT A MIXTURE.

The specimens examined are nearly all more basic than is demanded by the four formulæ above given. All of the other formulæ enumerated in the books require still more acid. So that we must either consider our commercial products as having more basic formulæ, or else that they are mixtures in indefinite proportions of bismuth hydroxide with the real subnitrate

The latter is most likely the correct view. For the calculation of the actual proportions leads to formulæ of such complexity that it is not likely that they have any existence in fact. The crystalline appearance under the miscroscope does not necessarily indicate that we have a single salt, but may be due to successive crystalline deposits of salts of different composition, varying in proportion according to the different methods of manufacture.

Clinical experience with these more basic preparations can alone decide whether they are sufficiently useful to recognize them by enlarging the pharmacopœial limits, so as to include them in the official standard.

While experimenting with the above and other specimens I experienced a difficulty that may be of sufficient interest to mention. One of the tests prescribed in the U. S. P. not only for bismuth but also for several other metallic salts, directs that after precipitating all of the metal by hydrogen sulphide from acid solution, the filtrate should leave no residue on evaporation. During the continued drought of last summer the atmosphere in my surroundings so abounded in very fine dust that it was impossible to evaporate even the purest distilled water or alcohol without leaving a very small residue. After heating over the Bunsen flame on platinum foil they invariably left a very slight yet distinctly visible ring on the polished surface. All of the specimens tested left a similar trace of residue. Having found that this did not necessarily indicate an impurity in the salt, but was due to atmospheric conditions, I disregarded it. On repeating the evaporation during a spell of wet weather, a drop of the same liquid left no stain behind.

* Report No. 9 of Research Committee B of the Committee on Revision of the Pharmacopœia. Communicated by the author.

† See the American Druggist and Pharmaceutical Record XXV, p. 10.

## New Method of Estimating Mercury in the Urine.

Dr. Adolf Jolles (*Univ. Med. Jour.*) advises the following method of making a quantitative analysis of the urine for mercury: Powdered gold, specially prepared in order to give it the highest possible amalgamating power, is added in the proportion of 2 gm. (31 g.) to from 100 to 300 ccm. (3¼ to 9½ fl. ozs.) of urine and from 1 to 3 ccm. (15½ to 46 minims) of concentrated hydrochloric acid. The mixture is heated and from 2 to 3 cm (31 to 46 minims) of chloride of tin, freshly prepared, is added. If a flaky precipitate of hydratedoxide of tin is produced, too little hydrochloric acid has been used—an error which is easily corrected. The liquid is heated to 70 or 80 degrees C. (158 or 178 degrees F.), and from 30 to 50 ccm. (1 to 1½ fl. ozs.) of the chloride of tin solution added, stirring in the meanwhile. The mixture is heated and stirred for five minutes longer and left to stand for several minutes. The liquid above the amalgam is poured out and the latter washed several times with distilled water until the reaction of chlorine is no longer obtained from the water. Three or four drops of a hot concentrated solution of nitric acid is added to the purified amalgam, several drops of water poured on, and finally an equal quantity of chloride of tin. The amalgam and the gold are then weighed separately, after having removed the mercury. According to Dr. Jolles, the test is not as costly as it might appear, as the gold can be used for a number of analyses.

## WRINKLES IN DISPENSING.

At a meeting of the Glasgow and West of Scotland Pharmaceutical Association, held recently, a member submitted notes upon the three following points:

### CREOSOTE INCOMPATIBLE WITH CAMPHOR.

| | |
|---|---|
| Creosoti | ♏ij |
| Quin. disulph | gr. j |
| P. camph | gr. j |
| Aloin | gr. ss |
| Ext. bellad. alch | gr. 1-24 |
| Strychninæ | gr. 1-64 |

M. ft. pil. mitte 48 tales.

All the ingredients except the creosote were mixed together, and then creosote pill-mass added. The combination immediately assumed the consistence of very soft soap. The addition of an equal quantity of absorbent powder, consisting of liquorice powder 2 parts and tragacanth powder 1 part, still left it like soft putty. Camphor and creosote — like camphor and carbolic acid—seemed to be incompatible.

### AN IMPURE SALT.

The impure salt was bismuth. subcarb., and the impurity (ammonium nitrate) was discovered accidentally when dispensing a recipe containing pot. bicarb. and bismuth. subcarb. On triturating these in a mortar a strong smell of ammonia made itself felt. Fifty grains of the bismuth. subcarb. were washed with water, and the filtrate gently evaporated to dryness. No visible residue was left, but on washing the evaporating basin with a dram of water and dropping in sulphate of indigo solution, it was instantly decolorized. The author did not repeat the experiment so as to estimate the amount of admixture, which was more than appreciable, as, after putting in 30 drops of indigo solution, the mixture was still clear.

### A BAD OINTMENT DILUENT.

The bad ointment diluent was *paraffinum molle*. They had heard a good deal lately about carbolic acid and other medicaments, which had been incorporated with it not remaining so. In the early part of the summer he made some diluted nitrate of mercury ointment, petrolatum, U. S. P., being used. After the recent heat wave he found that separation had taken place, the bottom of the pot being surrounded by a ring of transparent matter, having the color and consistence of syrup. The U. S. P., after describing the process by which the soft paraffins of commerce are obtained, said: "The clearer portion of the filtrate is then brought to the proper melting point, if necessary, by the addition of pure block paraffin, which dissolves perfectly in the warm liquid oil." [The U. S. P. does not describe the process by which soft paraffins are obtained, at least not in this way. The author of the paper has evidently confused the U. S. Pharmacopœia with the U. S. Dispensatory. ED.] Probably that might account for the separation, while it was another illustration of the unsuitableness of *paraffinum molle* as an ointment base, and also seemed to demonstrate that a compound composed of ingredients having different melting points did not acquire a melting point which was the mean of the whole, but that fractional separation might occur when a very gradually increased temperature was maintained for some time, with periods of cooling intervening, the result being practically distillation *per decensum*. The U. S. P. said: "When petrolatum is ordered without specifying its melting point, the low melting variety which liquefies at 40 degrees C. (104 degrees F.), is to be dispensed." [This statement refers to the Pharmacopœia of 1880, which is obsolete. ED.] Seeing the higher melting points were artificially produced, would it not be better to fix the melting point at 40 degrees C., and allow the physician and pharmacist to add block paraffin as reqired? [The author's whole argument is without point, seeing that it is based on Pharmacopœia statements which no longer apply to the article under discussion. Our Glasgow brethren should invest in a copy of the 1890 Pharmacopœia. ED.] A range of 11 degrees C. (40-51 degrees) in the melting point seemed too wide, more especially as they could all be said to be prepared according to the standard. B. P. *paraffinum molle* with a range of 10 degrees F., would be (95-105 degrees) less open to objection did it not include petrolatum as a synonym.

### NOTES ON GLYCERIN SUPPOSITORIES.

A member said the B. P. strengths made according to the recipe in "Squire" were of the same strength, without the troublesome evaporating down process, were soluble in the mouth, but the toughness depended upon the quality of the gelatin.

*With Agar-Agar, 50 Per Cent.*

The *Year-Book of Pharmacy*, 1895, gave a formula for this from a French source, and it was claimed that the result gave a more transparent mass, which did not stick to the mold nor clot, and produced a more elegant article when finished. The specimens he exhibited were made that day, and already a good quantity of glycerin had leaked from them, and, most fatal objection of all, they would not melt at blood temperature.

*With Sodium Stearate, 95 Per Cent.*

This suppository, for which an American formula was given in the *Year-Book of Pharmacy*, 1894,* had attracted considerable attention on account of the large quantity of glycerin contained, and had been put on the market by an American firm of druggists in small bottles of five each. Stearic acid was gently melted in glycerin, and enough carbonate of soda added to make neutral. The operation required care, and the result was a clear transparent mass, forming, when melted and cast into molds, a very pretty suppository, but highly hygroscopic and requiring to be put into air tight bottles as soon as made. These suppositories melted very slowly in the mouth, and he was of opinion that in point of efficiency the B. P. article was superior to the others on account of its lower melting point.

### DISPENSING QUERIES.

The subjoined notes on dispensing queries were communicated to the Edinburgh Chemists' Assistants' and Apprentices' Association, December 13, by William Duncan.

In the following prescription, the whole of the menthol, on addition of the spirituous tincture, collected and formed a cake on the top of the liquid:

*AMERICAN DRUGGIST, XXIV, p. 34.

### SEPARATION OF MENTHOL INGENIOUSLY AVOIDED.

| | |
|---|---|
| Tinct. iodi | ʒ v |
| Menthol | ʒ iss |
| Glycerini | ʒ j |
| Aquæ, ad | ʒ iv |

A suitable mixture was obtained by dissolving the iodine and potassium iodide in the water, then reducing the menthol to powder and rubbing it up with the glycerin, and then adding the rectified spirit of the tincture last.

### CRYSTALLIZATION IN A MIXTURE.

In the case of the following prescription, the lithium carbonate and potassium bicarbonate crystallized out on standing:

| | |
|---|---|
| Tinct. strophanthi | ♏v |
| Lithii. carb | grs. ij |
| Potass. bicarb | grs. xv |
| Sp. ammon. aromat | ʒ j |
| Aquæ, ad | ʒ ss |

The crystallization was due to the large quantity of alcohol present, and could only be avoided by increasing the quantity of water.

### QUININE AND HYDROBROMIC ACID REACTION.

In the following instance complaint was made that the mixture became muddy from separation of a crystalline precipitate:

| | |
|---|---|
| Quin sulph | ʒ j |
| Glycerini | ʒ iv |

Add acid. hydrobrom, q. s. to dissolve the quinine.

If acid. hydrobrom. dil. B. P. is used, the solution is quite clear. The muddiness was found to be due to the use of the acid. hydrobrom. made by Fothergill's process from potassium bromide and tartaric acid, with consequent separation of quinine tartrate.

### HYDRATION OF BOROGLYCERIDE AND FORMATION OF CRYSTALS.

The following lotion on standing soon deposited crystals:

| | |
|---|---|
| Boroglyceride | ʒ j |
| Glycerini | ʒ j |
| Lot. hydrarg. perchlor. (gr. 1-6 to ʒ j) | ʒ vj |

The crystals were boric acid, formed by hydration of the boroglyceride. This could not be avoided, and the mixture was, therefore, incompatible.

In the next prescription there was separation of a flocculent precipitate, and the question to be answered was whether, and if so, when, the precipitate should be filtered out. Mr. Duncan said if it was to be filtered it should be done before addition of the liquor strychninæ, to avoid possible loss of alkaloid. He thought it was always permissible to filter such mixtures for the sake of appearance, provided there was no loss thereby of active ingredients.

## Some Cosmetic Formulas.

### BRILLANTINE.

[*Der Seifenfabrikant.*]

#### VIOLET.

| | |
|---|---|
| Olive oil | 22 ounces |
| Cassie oil | 5 ounces |
| Violet extract | 7 ounces |
| Orange extract | 1 ounce |
| Orris essence | 16 grains |

#### HELIOTROPE.

| | |
|---|---|
| Olive oil | 22 ounces |
| Jasmine oil | 2 ounces |
| Tincture of vanilla | 7 ounces |
| Tincture of tonka | 1 ounce |
| Bergamot oil | 160 grains |
| Geranium oil | 24 grains |
| Cedarwood oil | 24 grains |
| Clove oil | 20 grains |
| Heliotropin | 16 grains |
| Vanillin | 2½ grains |

## Distilled Water.*

By J. U. Lloyd,†
Cincinnati.

It has been found that, by means of a stone condenser, ordinary Ohio River water could be employed to make distilled water that would stand the requirements of the U. S. P. concerning organic matter.

### INORGANIC MATTER.

It was also found that, by means of evaporation in platinum, this water left visible rings of inorganic matter. On determining the amount of this matter, it was found that 100,000 ccm. left 1.8 gm. of residue, which proved to be dissolved stone, and constant. Tucker‡ gives the following limits of observed residues with glass condensers:

100,000 parts of water left from 2.20 to 23.00 parts of residue. In this connection it may be stated that glass, tin, stone and aluminum condensers all leave residues, which, as Prof. T. H. Norton is investigating the subject, will not be considered in detail here.

### KEEPING QUALITIES OF DISTILLED WATER.

In this direction, the question presenting itself is as to what length of time, under ordinary shop conditions, distilled water may be kept. While it is evident that in securely sealed bottles no change can occur to alter the organic constituents, still, in bottles drawn from in the course of business, the question of increasing organic contamination is pertinent.

March 4th, two 5-pint glass-stoppered bottles were filled with water fresh from the still.

*A* was closed with the glass stopper, loosely covered with a cap of parchment paper, and was successively tested: March 6th, 7th, 11th, 27th, April 4th, 15th, May 16th, June 12th, August 23d and December 3d.

Each time, of course, the usual atmosphere replaced the abstracted liquid, but the water stood the test in all instances; in the last examination, the pinkish tint faded considerably upon ten minutes' boiling, but was still apparent the following day.

*B* was provided with a cork stopper, having two perforations, through which were inserted a thistle tube containing sulphuric acid and a siphon tube with stop-cock. A plug of absorbent cotton was placed in the funnel of the thistle tube.

This precautionary experiment was probably unnecessary as shown by the result of *A*; however, the water was tested March 7th, 11th, April 4th, 15th, May 16th, June 12th and December 4th, without evidence of material change.

It was noticed that the pinkish tint faded less than in the case of *A*, hence it is manifest that distilled water kept in a bottle protected as before described deteriorates less than under ordinary precautions.

Another series of tests was made of distilled water kept in smaller bottles, as follows:

March 15th, 14 glass-stoppered quart bottles, perfectly clean, were filled successively from the still, with water that stood the permanganate test of the U. S. P. A paper cone was inverted over the neck of each bottle, the intention being to examine the bottles successively each month. They were placed on a shelf in the laboratory.

Bottle I was further tested April 15th, May 16th, June 17th, August 23d and December 4th. The last portion stood the permanganate test perfectly, and this notwithstanding the fact that flakes had collected at the bottom of the bottle.

As the first bottle opened gave no evidence of organic change, it might have been deemed unnecessary to disturb all of the 14 sample specimens. Still, a few more were opened, as all of them contained a flaky sediment.

The following results were obtained:

II stood the test March 14th, August 23d and December 4th.

III and IV March 14th and December 4th.

V was examined with a view of determining how distilled water would keep in a bottle loosely covered with tissue paper only.

Water, distilled March 4th and contained in a glass-stoppered bottle, stood the test March 14th and June 17th. The stopper being removed, the mouth of the bottle was now loosely covered with tissue paper and the bottle placed on a shelf in the laboratory and tested again August 23d. It stood the test very well, but a sort of scum, resembling a fungus growth, had collected on top of the water. At the date of writing this (December 4th) the quantity of scum has increased, and a sediment has also formed. The clear intermediate liquid, withdrawn by means of a clean pipette, stands the permanganate test very well; but another portion, into which some of the large flakes were introduced purposely, was gradually decolorized by ten minutes' boiling. These flakes, however, which appear identical in their nature with those to be found in each of the 14 closed quart bottles, consist of inorganic material for the most part, but also contain organic matter, as incineration or treatment with sulphuric acid will demonstrate. Whether the inorganic portion of these flakes is only the inorganic matter which is held in solution by the distilled water, or whether they are due partly to some corroding influence exerted by the water upon the substance of the glass, is a point that was not determined in these experiments.

In now comparing the keeping qualities of distilled water, it is manifest, as shown by these experiments, that water remains almost unimpaired with regard to the permanganate test of the U. S. P. during a period of several months, and probably will stand much longer if the water is contained in quart bottles, even though it be withdrawn in parts at intervals. In larger bottles, say of five pints, the water gradually deteriorates during a period of several months if no special precautions are taken to purify the air entering in the place of the water withdrawn from the bottle.

During the examinations it was found that, in the presence of tobacco smoke, and also the vapor of nicotine in the air of the laboratory, the permanganate test was inoperative, the same being true in the presence of iodine vapors. Upon carrying the same quality of water to localities free from such contaminations it stood the permanganate reaction, thus showing that the tests should not be made in the presence of certain atmospheric impurities.

From the results of previous investigations it was seen that with suitable apparatus distilled water, to withstand the rigid organic test of the U. S. P., may be obtained direct from ordinary river water. In this connection it may be stated that the same good results have followed with water distilled during the entire season, both in summer and in winter.

Contrary to the preconceived opinion of the writer, no organic disturbance results in such water during the usual time that would be employed in emptying a medium sized container. Under ordinary conditions, and without special precaution, it can be used for dispensing purposes with confidence.

In applying the permanganate test the condition of the atmosphere might lead to incorrect conclusions concerning the water.

All distilled water encountered to date contains inorganic matter in solution, enough, under the conditions named in this paper, to deposit a sediment in time. This sediment also holds organic matter as an invariable constituent, which it seems difficult to exclude entirely in the making and keeping of the distilled water. Still the amount contained in the latter is so small that it does not perceptibly interfere with the permanganate test.

### CONCLUSION.

1. It is impractical (by reason of inorganic impurity) to make distilled water in glass, stone or ordinary metal condensers that will stand the pharmacopœial test.

"When 1,000 ccm. of distilled water are evaporated on a water bath to dryness, *no residue* should remain."—U. S. P.

2. The pharmacopœial test (permanganate) for organic impurities is not too rigid.

3. Precautions should be given in the Pharmacopœia that the permaganate test be not applied in a very impure atmosphere.

4. If the neck of the bottle be protected with an inverted paper cap or other cover, and the operator is careful not to touch the lip of the bottle with his hand, the water will retain its purity and the Pharmacopœia can demand that distilled water used for dispensing withstand the present test for organic matter.

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* Read at a meeting of the Philadelphia College of Pharmacy.

† The author extends his thanks to Dr. Sigmond Waldbott for assistance in details of this work.

‡ The Adulteration of Drugs. A lecture delivered before the Department of Chemistry of the Brooklyn Institute of Arts and Sciences, May 24, 1895, by Willis G. Tucker, and summarized in the American Druggist and Pharmaceutical Record for June 10, 1895.

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### ASTHMA IN CANARIES.

[*Chemist and Druggist*].

| | |
|---|---|
| Tincture of cayenne | ℥ j |
| Spirit of chloroform | ʒ ij |
| Ammonia citrate of iron | ʒ j |
| Fennel water to | ℥ vj |

A few drops to be put on a lump of sugar in the cage daily.

---

### SALOL DENTIFRICE.

| | |
|---|---|
| Salol | ʒ iiiss |
| Saccharin | gr. xij |
| Water | ℥ ss |
| Oil of peppermint | ʒ j |
| Oil of anise | ♏ v |
| Oil of fennel | ♏ v |
| Oil of cloves | ♏ ij |
| Oil of cinnamon | ♏ j |
| Alcohol to | ℥ vj |

Mix.

For a tooth powder use cretæ præcip. ℥ xij in place of alcohol.

## Prescription Statistics.

From the tabulation of 10,000 prescriptions, made for the Committee on Revision of the U. S. Pharmacopœia of the Illinois Pharmaceutical Association, the following summary has been made by C. S. N. Hallberg, who communicates it to the *Western Druggist*. While a larger number has been tabulated a summary is more easily comprehended when based on an even decimal number; thus 100 would represent 1 per cent. of 10,000, and the percentage proportion of each article to the whole number is seen at a glance from the number of times the article has been used. The summary represents one report on 2,000 and eight reports on 8,000 prescriptions, nearly equally divided between Chicago and the interior of the State of Illinois. The following is a list of the items most largely used, alphabetically arranged:

### DRUGS USED IN 10,000 PRESCRIPTIONS AND FREQUENCY OF USE.

| | |
|---|---|
| Acid, boric | 191 |
| " carbolic | 162 |
| " salicylic | 64 |
| " tanic | 82 |
| Aconite, tincture | 268 |
| Ammonium, chloride | 325 |
| Antikamnia, proprietary | 257 |
| Antipyrin, proprietary | 115 |
| Belladonna, extract | 89 |
| " tincture | 87 |
| Bismuth subnitrate | 465 |
| Cascara sagrada, fluid extract | 63 |
| " aromatic, proprietary | 59 |
| Chloral hydrate | 75 |
| Chloroform | 87 |
| " spirit | 73 |
| Cinchona, tincture, comp | 72 |
| Cinchonidine, all salts | 43 |
| Cocaine hydrochlorate | 69 |
| Codeine, all salts of | 121 |
| Copaiba | 73 |
| Digitalis, tincture | 188 |
| " all other preparations | 59 |
| Elixir calisaya | 165 |
| " iron, quinine and strychnine | 62 |
| " lactopeptine | 166 |
| Ergot, fluid extract | 120 |
| " all other preparations | 35 |
| Ether, nitrous, spirit | 252 |
| Gentian, tincture, comp | 79 |
| " all other preparations | 110 |
| Ginger syrup | 66 |
| " other preparations | 34 |
| Glycyrrhiza, syrup | 138 |
| " all other preparations | 117 |
| Hydrastis, Lloyd's proprietary | 48 |
| " all salts of | 15 |
| " other preparations | 63 |
| Hyoscyamus, tincture | 69 |
| " extract | 89 |
| " other forms | 39 |
| Hydrogen peroxide | 50 |
| " other preparations | 3 |
| Iodine, tincture | 71 |
| " other preparations | 48 |
| Iodoform | 38 |
| Ipecac, syrup | 259 |
| " other forms | 115 |
| Iron chloride, tincture | 205 |
| " iodide, syrup | 48 |
| " other preparations | 190 |
| Lactopeptine, proprietary | 95 |
| Lanoline, " | 47 |
| Listerine, " | 115 |
| Malt extract combinations, proprietary | 87 |
| Menthol | 45 |
| Mercury, comp. and prep's. not classified | 148 |
| " corrosive chloride | 120 |
| " mild chloride | 350 |
| Mercury, mass, pill | 73 |
| " ointment | 33 |
| Morphine sulphate | 400 |
| " all other salts and prep's | 45 |
| Nux vomica, extract | 171 |
| " " tincture | 268 |
| " " other forms | 33 |
| Opium powder | 92 |
| " " Dover's | 150 |
| " extract | 63 |
| " tincture | 173 |
| " " deod | 92 |
| " " camph | 464 |
| " other preparations | 12 |
| Orange, syrup | 158 |
| Phenacetin | 241 |
| Pancreatin | 11 |
| " proprietary preparations | 87 |
| Pepsin, saccharated | 38 |
| " scale | 87 |
| " essence | 126 |
| " proprietary preparation | 123 |
| Podophyllum resin | 53 |
| " other preparations | 6 |
| Potassium arsenite solution | 120 |
| " bromide | 215 |
| " chlorate | 220 |
| " iodide | 262 |
| Quinine sulphate | 800 |
| " hydrochlorate | 37 |
| " all other salts | 140 |
| Resorcin | 39 |
| Rhubarb, aromatic syrup | 82 |
| " other preparations | 128 |
| Salol | 271 |
| Sarsaparilla, compound syrup | 70 |
| " other preparations | 30 |
| Senaga syrup | 72 |
| Senna, all preparations | 18 |
| Soap liniment | 50 |
| Sodium, borate | 70 |
| " bicarbonate | 355 |
| " salicylate | 265 |
| Squill, syrup | 125 |
| " " comp | 167 |
| " other preparations | 32 |
| Strophanthus, tincture | 24 |
| Strychnine sulphate | 110 |
| " all other salts | 22 |
| Sulphonal | 56 |
| Syrup hypophosphites | 42 |
| " " proprietary preparations | 97 |
| Tolu syrup | 345 |
| " other preparations | 3 |
| Turpentine, oil | 54 |
| Vaseline | 174 |
| " other forms | 10 |
| Veratrum viride, tincture | 59 |
| Viburnum comp., proprietary | 37 |
| Water, peppermint | 200 |
| " fennel | 90 |
| " rose | 65 |
| " anise | 120 |
| " cinnamon | 100 |
| " cherry laurel | 100 |
| Wild cherry, syrup | 155 |
| Yerba santa, syrup | 40 |
| " " other forms | 8 |
| Zinc oxide, ointment | 55 |
| " sulphate | 125 |
| " sulphocarbolate | 65 |

### PROPRIETARY ARTICLES IN 10,000 PRESCRIPTIONS AND FREQUENCY OF USE.

Proprietary articles were used 2,613 times in the 10,000 prescriptions. But a small proportion of these were used in combination with other medicines, so that it may safely be asserted that 25 per cent. of the prescriptions were made up of proprietary articles. Estimated on the basis of cost these 25 per cent. would, no doubt, represent fully 50 per cent. of the total cost to the dispensers of the 10,000 prescriptions. They may be classified as follows:

| | |
|---|---|
| 1. Antiperiodics, etc | 827 |
| 2. Antiseptics, solutions, etc | 248 |
| 3. Hypnotics | 13 |
| 4. Ointment vehicles | 232 |
| 5 Cod liver oil preparations | 28 |
| 6. Digestive ferments: | |
| Pancreatin | 55 |
| Pepsin | 72 |
| Lactopeptine preparations | 345 |
| 7. Miscellaneous liquid preparations | 773 |
| Total | 2,613 |

The following are the preparations in detail and the frequency of their designation in 10,000 prescriptions:

| | |
|---|---|
| 1. Acetanilid* | 118 |
| " comp | 3 |
| Antifebrin | 100 |
| Antikamnia | 257 |
| Antipyrin | 115 |
| Exalgin | 1 |
| Febriline | 8 |
| Lactophenin | 7 |
| Phenacetin | 282 |
| Quinine, cincho | 6 |
| " dextro | 11 |
| " phosphomuriate | 16 |
| Quinquina | 3 |
| Salipyrin | 2 |
| Salol | 271 |
| Salophen | 12 |
| Trional | 18 |
| 2. Alumnol | 1 |
| Aristol | 62 |
| Benzoinol | 4 |
| Borolyptol | 1 |
| Creolin | 2 |
| Dermatol | 5 |
| Europhen | 1 |
| Ichthyol | 40 |
| Iodol | 14 |
| Napthol, beta* | 10 |
| " benzo | 3 |
| Listerine | 115 |
| 3. Chloralamid | 9 |
| Chloramine | 1 |
| Diuretine | 2 |
| Urethane | 1 |
| 4. Vaseline | 174 |
| Albolene | 23 |
| Blancoline | 3 |
| Petrolatum* | 22 |
| " carbolized* | 2 |
| Saxoline | 1 |
| Lanolin | 47 |
| Mollin | 2 |
| Unguentine | 2 |
| 5. Cod liver oil emulsions: | |
| Scott's | 9 |
| Wampole's | 18 |
| Phillips' | 1 |
| 6. Pancreatin* | 11 |
| Pancreopepsin | 28 |
| Pancrobiline | 1 |
| Papoid | 21 |
| Panopeptine | 5 |
| Pepsin* | 125 |
| " solution, arom* | 35 |
| " essence* | 126 |
| " essence, Fairchild's | 53 |
| " cordial, P D. & Co | 19 |
| Ingluvin | 26 |
| Peptenzyme | 16 |
| " elixir | 24 |
| Lactopeptine | 95 |
| " elixir | 166 |
| Elixir maltopepsin | 10 |
| " peptonated, Pizall | 8 |
| 7. " miscellaneous: | |
| Acid phenique, syrup, Declat | 1 |
| " hydriodic syrup, Gardner's | 8 |
| Arsenauro | 2 |
| Asparoline | 2 |
| Bromidia | 18 |
| Bromides, Peacock's | 17 |
| Bromo-caffeine | 3 |
| Cactina pellets | 11 |
| Calisaya cordial, Tilden's | 2 |
| Calisaya La Rilla | 2 |
| Cascara sagrada, cordials | 59 |
| Celerina | 22 |
| Dioviburnia | 1 |
| Dephtherine | 3 |
| Elixir three bromides | 2 |
| " three chlorides | 15 |
| " three iodides | 5 |
| " nutrans | 6 |
| " phosphates, Wheeler | 14 |
| Ergotole | 2 |
| Firwein | 26 |
| Freligh's tonic | 5 |
| Glycerite kephaline | 1 |
| Glycozone | 2 |
| Glycophenique | 9 |
| Hemo-cardiacine | 2 |
| Hydrastis, fluid | 37 |
| " colorless, Lloyd's | 48 |
| Hydroleine | 5 |
| Kola cardinette | 3 |
| Liquor sedans | 2 |
| Magnesia milk | 6 |
| Malt extracts | 23 |
| Maltine and preparations | 24 |
| Liquid bread | 1 |
| Manganese, ferro peptonate | 11 |
| Neurosine | 3 |
| Opium, elixir | 5 |
| Papine | 27 |
| Pepto-mangan, Gude | 17 |
| Peptonoids, liquid | 29 |
| " creosote | 18 |
| Phospho-albumen | 2 |
| Phytoline | 2 |
| Pinus canadense, ext | 15 |
| Pulv. salini | 20 |
| Sandal oil, Midy's | 15 |
| Sanmetto | 22 |
| Sarsaparilla, Guysott's | 3 |
| Succus alterans | 4 |
| Syrup of fig | 1 |
| " hypophosphites | 5 |
| " " Fellow's | 62 |
| " " McArthur's | 22 |
| " " Wampole's | 8 |
| " iron chloride, Weld's | 1 |
| " roborans | 2 |
| Tongaline | 17 |
| Tritica | 8 |
| Uterine tonic | 5 |
| Viburnum compound | 22 |
| Viburnal | 4 |
| Wine cod liver oil | 15 |
| " Mariani | 8 |
| Yerbazine | 5 |

The consumption of proprietary articles as compared with the non-proprietary, though, as stated, about 25 per cent. in volume, is probably not less than 50 per cent. in value.

It may be well to remember that the large percentage of proprietary preparations specified in physicians' prescriptions disclosed by the above does not represent the full percentage actually sold by retail-

*Introduced for comparison but not included in the totals.

ers in that a large part of the demand comes direct from consumers without the aid of a prescription. What caters to the ease of the physician in the way of ready-made medicines with a proprietary title also caters to the ease of the patient in obtaining supplies without the doctor's advice and without the accompanying fee. How large a percentage of the proprietaries consumed by direct self-medication is to be added to the above consumed on prescription orders in order to arrive at the total consumption is necessarily conjectural, though undoubtedly large, as the experience of the average druggist will attest.

## A Fluorescent Constituent of Calumba.*

By Alexander Gunn, F.C.S.

There are probably few pharmacists who have not experienced the difficulty of obtaining fluid preparations of calumba in a brilliant condition. Whether tincture, fluid extract or infusion, it is found to be a matter of impossibility to remove the turbid appearance by any mode of filtration.

In dealing with concentrated liquid preparations of calumba the difficulty is accentuated, the appearance of such preparations being frequently akin to that of pea soup. Careful observers may, however, have noticed that such solutions, when examined by transmitted light, are perfectly translucent and that there is evidently no trace of solid matter in suspension.

The firm with which I am connected frequently receives complaints from pharmacists of the turbidity of its calumba preparations, and occasionally the preparation itself is returned as "unfit for use." When it is pointed out that the turbidity is only apparent, and that the opalesence is due to phenomena of optical interference, the explanation is accepted with more or less hesitation, and it appears desirable that some positive evidence should be obtained to prove the correctness of the theory. During the last fortnight I have been engaged in investigating the matter, with results sufficiently encouraging to induce further reseach.

To demonstrate in a striking and simple manner that calumba contains a fluorescent body, half fill a test tube with B. P. tincture of calumba. Examine this by reflected light, and it will be seen that there is a fluoresence of a pronounced green tint. Add now a few drops of liquid potassæ, and again observe by reflected light; the fluoresence now is of a velvety deep blue or violet color.

Although I have not at present been able to obtain the fluorescent constituents in a sufficiently pure condition to ascertain its nature, I have found the following plan successful in partially separating it from the coloring matter of the tincture:

Take 50 ccm. of the tincture and acidify with 5 ccm. dilute hydrochloric acid. Shake with a sufficient quantity of ether to form a distinct layer on separating. The yellow ethereal solution is shaken with purified animal charcoal during a quarter of an hour and then filtered. The filtrate is now gently shaken with a 1 per cent. solution of ammonia in water. There is a flocky precipitate thrown out of the ammoniacal solution, but on filtration the fluoresence will show up beautifully.

In order to isolate the fluorescent body and to ascertain its composition I take a strong proof spirit percolate of calumba (say of such a strength that 1 = 1), mix with about three times its volume of distilled water, and stir in some magnes. calc. and kieselguhr, which help, although imperfectly, to remove something that interferes with the proper extraction of the fluorescent body. Allow to stand for a day or so, shaking up occasionally, and then filter; add about an equal volume of dilute sulphuric acid, shake with ether and separate the ethereal liquor, which is of a slightly yellow color. The acid liquid will then be free from fluorescence. The ethereal solution when shaken with ammoniacal water yields the fluorescence to the latter.

I cannot imagine that this fluorescence is due to any already known constituent of calumba. Such a property as fluorescence in an isolated body is, one would suppose, too obvious to be overlooked.

* *Pharmaceutical Journal.*

## Some Observations Regarding Kola Nuts.*

By Alfred R. L. Dohme and Hermann Engelhardt,

Baltimore, Md.

The kola nut (Cola Acuminata) originally was obtained exclusively from Africa, principally from the country south of Abyssinia, where, too, another caffeine-yielding plant, the well-known coffee bean (Coffea Arabica) is indigenous. As this drug has become so well known and popular recently, and as its properties and a description of its botany, chemistry, pharmacognosy and pharmacology have become generally known among pharmacists, a repetition of these will be unnecessary here. From most parts of Northern Africa considerable quantities are shipped, principally from Sierra Leone, Gambia, Kano and Timbuctoo. The most highly prized varieties are those raised in Kong and the Mandingo lands, although it has been customary to assume that the kola nuts from Jamaica are the most desirable. The Jamaica nuts are unquestionably larger and handsomer in appearance, but it has often been shown that the handsomest and boldest varieties or parts of the plant are not the most valuable medicinally.

We know that the virtue of a drug depends upon one or more ingredients, and the criterion, hence, for a medicinally active and desirable drug, is the amount of active ingredient that it contains, as determined by assay. It is, of course, desirable and expedient that the U. S. P. should give processes of assay for all drugs that contain active principles, and then establish a certain percentage of active principle as a standard for each drug. This, it appears to the writers, is one of the foremost problems that should confront and occupy the attention of the Committee on Revision of the U. S. Pharmacopœia.

The problem, Which is the most desirable variety of kola nut, in so far as it contains the most caffeine? has several times presented itself to the writers, and it was a question if West India kola nuts were actually worth 25 per cent. more than African nuts. It has been pretty well established that all that possesses any value in kola nut is the caffeine, for the analysis of Schlotterbeck and Knox † brings to light nothing else that might be considered of value medicinally, for 3 per cent. of tannic acid, 4 of sugar and 35 of starch, can hardly be given any medicinal value. Attfield † found that kola nuts contain 2 per cent. caffeine, whereas Heckel and Schlagdenhauffen ‡ obtained as much as 2.3 per cent. caffeine, and, besides this, theobromine, 0.023 per cent.; fats, 0.5 per cent.; tannic acid, 1.59 per cent.; starch, 33.7 per cent. Schlotterbeck and Knox obtained practically the same figures as these, but none of these investigators state whether they used West Indian or African kola nuts. Good typical samples of both these varieties of kola nuts in the dry state were procured from reliable sources. The African nuts were not prepossessing in appearance, being smaller and darker than the Jamaica nuts, and more shrivelled and less perfectly cured than these. Two methods of assay were tried in case of each kind of nut, using chloroform in the one and 33⅓ per cent. alcohol in the other, as boiling with pure water was impracticable, on account of the large amount of starch contained in the nuts.

### METHOD I.

This was similar to that employed by Schlotterbeck and Knox, and consisted merely in extracting the powdered nuts in a Soxhlet apparatus until the chloroform runnings no longer yielded a residue, evaporating off the chloroform and evaporating the reside to dryness on a water bath with calcined magnesia and sand, in a flat porcelain dish. This dry powder was then placed in an Erlenmeyer flask, and boiled with chloroform on a water bath. It was necessary to put a cork fitted with a small condenser or a long glass tube on the flask, so as to avoid loss of chloroform. After heating to boiling for half an hour the contents of the flask were allowed to cool and then filtered into a tared flask. On distilling off all the chloroform and heating the flask for half an hour on a water bath at 100 degrees C., it was weighed and the amount of caffeine obtained thus determined. The caffeine obtained was not quite white, but had a light brownish tint.

### METHOD II.

The powdered nuts were boiled in an Erlenmeyer flask with an inverted condenser or long tube attached, on a water bath for three hours, with a mixture of two parts of water and one part of alcohol by volume. Part of the starch will, of course, be hydrolyzed, but not sufficient to render filtration impossible. The contents of the flask, after cooling, were filtered and the filtrate evaporated nearly to dryness on a water bath in a porcelain dish. When nearly to dryness, calcined magnesia and sand were added and all evaporated to complete dryness, stirring carefully and frequently. The residue was then transferred to an Erlenmeyer flask and exhausted with chloroform and treated just as in case of Method I. The caffeine obtained by Method II was of a pure white color, and was hence purer than that obtained by Method I. Besides this advantage of Method II over Method I, may be men-

* Read at a meeting of the Philadelphia College of Pharmacy.

* Proc. Amer. Phar. Asso., 1895.

† *Amer. Jour. Pharm.*, 1865, p. 205, and *Jahresbericht der Pharmacie*, 1865, p. 157.

‡ *H. and S.*, "Des Kolas Africains," Paris, 1884, Masson.

tioned the fact that Method II was much more expeditious and satisfactory, and extracted more caffeine than Method I.

Below are appended the results:

| | African Nuts. Per cent. | Jamaica Nuts. Per cent. |
|---|---|---|
| Method I.—Caffeine . | 2.04 | 1.75 |
| Method II.—Caffeine . | 2.24 | 1.93 |

These figures would indicate that the African kola nuts are richer in caffeine than the West India nuts, which was not to be expected, considering that the latter are the more expensive; furthermore, they show that the method which uses 33½ per cent. alcohol extracts the caffeine more completely than does the method which uses pure chloroform. The extract obtained from the Jamaica nuts was lighter in color than that from the African nuts, and resembled a tea infusion, whereas the extract from the latter resembled an infusion of coffee in color.

## Chinese Opium.*

By Frank Browne, F.C.S.

Acting Government Analyst, Hong Kong.

In the Chinese provinces of Kwei-chou, Yunnan and Szechuen large quantities of opium are grown for native consumption. In the "Legation Report on the Trade of China in 1894," Mr. Beauclerk, Secretary of Her Majesty's Legation at Peking, writes: "The customs revenue was increased by every division of trade with the sole exception of Indian opium. . . . Native opium is rapidly displacing the high priced imported drug, as will be seen from the various consular reports."

A reason adduced for this is that the home grown substance answers all ordinary requirements, and that the price is so low that any other better in quality is bought only by those who can afford it as a luxury.

Professor Attfield, in his "Report for 1892 on the British Pharmacopœia, 1895," mentions that it had been asserted that many hundreds of medical practitioners, equally familiar with the use of opium in England and India, have prescribed a 10 per cent. morphine Turkish opium, and a 5 or 6 per cent. (average) morphine Indian opium, in similar doses, without noticing any marked difference in sedative effect; at the same time he points out the desirability of further experiments with regard to the narcotizing power of Turkish and Indian opium.

It must be remembered also that the percentage of morphine is not the only consideration in determining the value of smoking opium, as it has been shown that some opiums low in morphine are preferred to others containing more of this alkaloid. A minute examination of Chinese opium has therefore been made in order to ascertain as far as possible not only the amounts of morphine, but also of other alkaloids possessing physiological activity, also its freedom from adulteration, from which results a better idea as to its true value may be had.

Genuine specimens of the 1893 crop were obtained through the kindness of H. E. Hobson, Commissioner of Customs, Hong Kong, from the provinces of Kwei-chou, Yunnan and Szechuen respectively. The cost of these opiums varies from 14 to 18 taels for 100 taels' weight (8⅓ English pounds)†

*Kwei-chou.*—This was in flat oval cakes, each weighing 1 catty (1⅓ English pounds). Each cake was wrapped, after the Chinese manner, in two folds of white tissue paper, then in thin brown paper, and bore a label on which was written in Chinese characters the name of the province and that of the seller. The drug itself was dark brown in color, oily to the touch, granular in fracture, fairly hard, and its odor was strongly narcotic.

*Yunnan.*—This was also in flat oval cakes resembling Kwei-chou opium, and was similarly wrapped and marked. The opium was black throughout, forming a smooth plastic mass, fairly hard, of good appearance and odor, not oily to the touch.

*Szechuen.*—In similar packages to the preceding. It was so soft that ten folds of a kind of tissue paper had been wrapped round to preserve the shape of the cakes. So much paper is an important consideration in buying this opium, as from a determination calculated on the dried opium, this paper formed 20 per cent. of its weight. The drug itself was black in color, smooth, plastic, with good odor. It contained, however, paper fiber in little lumps scattered irregularly throughout the mass. Not oily to the touch.*

In the gravimetric examination attention was given to—

1. Moisture.
2. Ash.
3. Solubility in cold water.
4. Morphine by the method described in the British Pharmacopœia.
5. Morphine. This and the following alkaloids by the process described.
6. Narcotine.
7. Papaverine.
8. Narceine.
9. Thebaine.
10. Codeine.

Both chemical and microscopical examinations were made for the presence of starch, sugar, gum, tannic acid and other likely impurities. The three specimens were found to be free from all foreign matter, except that the Szechuen variety contained paper fiber, which the microscopical examination showed was of the same character as the paper in which it was wrapped. In all estimations the opium taken was freed from this paper fiber.

*Determination of the Alkaloids.*—The process found to be most suitable for obtaining a solution containing the alkaloids was as follows:

Fifty grams of the opium, in which the amount of moisture had been previously ascertained, was exhausted with warm water. The insoluble portion was gently dried and exhausted in an extraction apparatus by means of ethylic alcohol. The alcoholic solution evaporated left a residue from which, after having been mixed with sand, the greater portion of the alkaloid could be extracted by means of a 2 per cent. solution of acetic acid in water, but the last traces were removed only by increasing the proportion of acid to 10 per cent. and using a gentle heat. The aqueous and acid solutions were then precipitated by ammonia; the precipitate having been removed, the liquid was shaken with amyl alcohol until all alkaloid was removed. The amyl alcohol solution was then evaporated, and the residue, together with the precipitate obtained by ammonia, were treated with boiling ethylic alcohol. The alcoholic solution evaporated left a blackish mass of crystals consisting chiefly of alkaloid.

The process for the separation of the alkaloids now obtained is Plugge's,* somewhat modified, certain additions to and alterations in his process having been made in order to quantitatively separate the alkaloids in a state of purity from a solution which contains these alkaloids in a state of but moderate purity.

The additions to and departures from the original process are here described as they were made throughout the separation.

In the case of Yunnan opium the narcotine and papaverine were precipitated as a gummy mass which could not be washed with water, but this difficulty was got over by using a semi-saturated solution of sodium acetate.

The papaverine from each opium was dissolved in weak hydrochloric acid, and precipitated by phospho-molybdic acid. The precipitate was shaken with baryta water and benzine; from the benzine the crystalline alkaloid was obtained on evaporation. The narcotine in all cases was very pure after crystallization from benzine.

The narceine precipitate had to be washed with a semi saturated solution of sodium acetate except in the Kwei-chou opium determination. In Yunnan and Szechuen opiums the narceine precipitate was found to contain narcotine and a little morphine. These were separated by dissolving the precipitate in weak acetic acid, shaking out the narcotine and narceine from the acid solution with chloroform, dissolving the chloroform residue in weak acetic acid, and shaking out the narcotine with ether, having previously made alkaline. The narceine was then obtained by means of chloroform, but being impure was dissolved in weak hydrochloric acid, precipitated by phospho-molybdic acid, and removed from the precipitate by shaking with baryta water and chloroform. The narcotine from the ethereal solution was dissolved in dilute hydrochloric acid precipitated by phospho-molybdic acid, and recovered by shaking with baryta water and ether.

Thebaine was obtained very pure from Kwei-chou opium by means of sodium salicylate and ammonia, as ordered by Plugge, but with the other opiums it was necessary to purify by dissolving in weak acetic acid, alkalizing and shaking out with ether.

Finally, the separation of morphine, codeine, and traces of narceine and thebaine, was effected by first shaking the acid solution with chloroform, as was done previously with the narceine precipitate, then having removed the chloroform from the acid solution by a gentle heat, soda solution and amyl alcohol were added to extract the remaining alkaloids. The amyl alcohol having been dissipated, the crystalline residue was treated with benzine, leaving morphine undissolved. The benzine residue was treated with water to remove codeine, and the codeine was then obtained by shaking the aqueous solution with benzine. The portion of the benzine residue from which codeine had been washed out was dissolved in weak acetic acid and added to the chloroform residue also dissolved in weak acetic acid; having added ammonia by shaking this solution containing the traces of narceine and thebaine with ether, the thebaine was sep-

* *Pharmaceutical Journal*, LV. 1329, p. 493.

† The Chinese tael is a weight of silver equivalent to 100 candareen; a British dollar is equivalent to 72 candareen.

* A specimen of 1895 Szechuen opium has been sent from Chinkiang. It is in round, flattened cakes, weighing about 2 pounds each; the base of each cake is a portion of the leaf of the banana plant. It appears to be opium of good quality.

* *Journ. Chem. Soc. Abs.*, lii, 851; *Archiv. Pharm.* [3], xxv, 343-354.

arated; the narceine was then removed from the alkaline solution by chloroform. In the three opiums the quantity of these traces of narceine and thebaine was very small.*

Observations were made with each alkaloid isolated, in order to see that it responded to its distinctive tests, and particular attention was devoted to the behavior of each alkaloid, when treated with pure chloroform, benzine and ether.

Quite a notable quantity of narcotine was precipitated with the narceine in Yunnan and Szechuen opiums. Before purification with phospho-moiybdic acid, it was noted in each case that this narcotine melted at about 60 degrees; purification raised the melting point more than 100 degrees.

When transferring the alkaloids from an aqueous solution to chloroform, benzine, ether or amyl alcohol it was found that the washing of these latter solvents with a little water was a precaution of considerable importance, decomposition of the alkaloid otherwise being probable.

From the remarks made during the paper, and from the results recorded in the chart, the quality of Chinese opium can be well seen. The Szechuen opium as sent had evidently been collected carelessly, but it is doubtful whether the presence of so much paper and paper fiber indicates intent to adulterate; rather, it seems as if the juice had been collected on paper and the whole mass incorporated, it being too much trouble to scrape off the juice, but this is only a conjecture. Conclusions as to the probable physiological activity of the opiums can be drawn from the results recorded.

COMPOSITION OF CHINESE OPIUM.

The results are calculated in 100 parts of the dried opium.

| | Kwei-chou. | Yunnan. | Szechuen. |
|---|---|---|---|
| Morphine | 4.321 | 9.487 | 11.271 |
| Narcotine | 1.968 | 6.151 | 6.612 |
| Papaverine | 0.848 | 0.404 | 0.334 |
| Narceine | 0.692 | 0.562 | 0.769 |
| Thebaine | 0.901 | 0.817 | 0.763 |
| Codeine | 0.065 | 0.157 | 0.181 |
| Morphine by British Pharmacopœia method | 3.83 | 8.94 | 9.86 |
| Matter insoluble in cold water | 51.62 | 40.50 | 44.19 |
| Moisture | 24.83 | 29.72 | 38.21 |
| Ash | 4.58 | 3.13 | 2.24 |

*Smoking Value of Chinese Opium.*—Extracts of Kwei chou, Yunnan and Szechuen opiums were prepared in the manner described by McCallum, and were then handed over to a Chinaman of considerable experience as a buyer, preparer and smoker of opium. He reported that the processs employed had been incomplete, as the three extracts possessed a grassy taste not observed in the extract prepared by himself from Indian opium. An examination of his process showed that a toasting operation was included, but as this was not in the process described, this toasting had not been followed in the preparation of the Chinese extracts. The three extracts had therefore been compared with a standard extract prepared in a different manner. As it is essential for purposes of comparison that the process should be the same, further quantities have had to be prepared and are at present stored until ready for comparison, after which the report will be communicated.

It has been already stated that the value of opium for smoking purposes does not depend on the amount of morphine. The Chinese observer reported that comparing the above three extracts with each other, the Kwei chou was the best and strongest, the Yunnan was second in quality and strength, and the Szechuen was the most inferior, although this last contains much more morphine than the Kwei chou variety.

A series of similar observations is being made in order to obtain more complete information as to the constituents of Indian opium.

* The morphine, narcotine, papaverine, narceine and codeine were all weighed in the crystalline form. The thebaine from Kwei-chou opium was a white powder which deposited crystals after solution in ether; the thebaine from Yunnan and Szechuen opiums was in a similar state of purity. Each alkaloid was dried at 100 degrees.

## An Ingenious Fraud in Compound Liquorice Powder.

Some months ago, says George Coull in the *Chemist and Druggist*, I was handed a sample of *pulvis glycyrrhizæ compositus* for examination. The customer wished to have it matched, especially the color, which was lighter than any I have ever seen.

On comparing the sample with a standard sample of our own the following points of difference were observed. Standard sample I shall call No. 1, and sample sent for examination No. 2:

*α. Physical appearance.*—No. 2 was lighter in color than No. 1, and it was not ground to such a fine powder, there being more fibers of the liquorice root in No. 2 than in No. 1.

*β. Ash.*—No. 2 yielded a slightly higher percentage of ash than No. 1 did.

*γ. Sugar.*—Determination of the sugar in the *cold water* extract by Fehling's solution, after inversion, revealed the fact that the samples contained practically the same amount.

*δ. Color of aqueous extract.*—When equal quantities of the powders were shaken with equal volumes of water for equal periods of time, No. 1 gave a solution considerably darker in color than No. 2.

*ε. Taste.*—No. 1 had the characteristic sweet taste of liquorice, No. 2 being very bitter in comparison. A persistent bitterness was left at the back of the throat when a little of the latter was swallowed.

The first idea that naturally suggested itself on looking at the samples was that No. 1 contained a larger proportion of sugar than it ought to, hence its lighter color. The sugar determination, however, negatived this view of the matter.

After fully considering the above mentioned points of difference, the only other conclusion I could come to—and it is a sufficiently startling one—was that the sample submitted to me had been compounded with liquorice root either partially or entirely deprived of its soluble matters.

All the evidence points to this being the case. If liquorice root is exhausted with water, the dark coloring matter will be extracted, and the powder will consequently give a lighter colored solution with water; the ash also will be a little higher owing to the loss of the organic coloring matter and increased percentage of sulphate and phosphate of calcium; and finally the sweet taste of the genuine root will be almost entirely absent. When it is remembered that the function of the liquorice root in the compound powder is to cover the bitter taste of the senna and give a pleasantness to a mixture that would be nauseous without it, and that one sample had a pleasant taste and the other a persistent bitter taste, I think it is conclusively proved without further evidence that the liquorice is not present in proper proportion.

This particular form of adulteration is rather unique, and shows the versatility of the modern adulterator. Where the fraud was perpetrated, whether the liquorice was exhausted in Britain or in the country in which it was collected, only the makers of the compound powder can tell. It does not seem possible that this kind of sophistication can be indulged in with impunity for any length of time especially as it can be so easily detected by the sense of taste. At the same time, it may not be inopportune to extend a word of warning against this quite up-to-date form of fraud.

## Dining from Bouquets.

Although it is well known that many kinds of flowers are used in medicine, the fact may not be known to many that the blossoms of certain plants are employed as articles of food. In many parts of India the flowers of a sapotaceous tree (*Bassia latifolia* or *mahwah*) form a really important article of food. These blossoms, which are succulent and very numerous, fall at night in large quantities from the tree, and are gathered early in the morning and eaten raw. They have a sweet but sickly taste and odor. They are likewise dried in the sun and sold in the bazaars The Bheels dry them and store them as a staple article of food, and so important are they considered for this purpose that when in expeditions for the punishment or subjection of these tribes, when unruly, a threat is made by the invading force to cut down their Bassia trees. The menace most commonly insures their submission. An ardent spirit like whiskey is distilled from these flowers, and is consumed in large quantities by the natives of Guzerat, etc. The Parsees and hill people eat the flowers both raw and cooked, and often with the addition of grain, and also make sweetmeats of them. A single tree will afford from 200 to 400 pounds of the flowers.

The blossoms of another species (*B. longifolia*) are employed in a similar manner by the natives of Malabar and Mysore, where it abounds. They are either dried and roasted and then eaten, or are bruised and boiled to a jelly and made into small balls, which are sold or exchanged for fish, rice and various sorts of small grain. The flowers of the Judas tree (*Cercis Siliquastrum*) of Europe have an agreeable acid taste, and are sometimes mixed with salads or made into fritters with batter, and the flower buds are pickled in vinegar. The flowers of the American species (*C. Canadensis*), the red bud, are used by the French Canadians in salads and pickles. The flowers of the *Abutilon esculentum* (*bencao de deos*) are used in Brazil as a boiled vegetable. The flowers of *Moringa pterygosperme* (the horse radish tree) are eaten by the natives of India in their curries.

The large and showy flowers of *Tropœolum majus* (the Indian cress or nasturtium) are frequently used along with the young leaves as a salad. They have a warm taste, not unlike that of the

common cress, and it is from this circumstance that the plant has obtained the name of nasturtium. The young calices of *Dillenia scabrella* and *D. speciosa*, which are swollen and fleshy, have a pleasantly acid taste, and are used by the inhabitants of Chittagong and Bengal in their curries and also for making jelly.

The flowers of *Rhododendron arboreum* are eaten by the hill people of India, and are made into a jelly by the European visitors. Yet poisonous properties are usually ascribed to the species of this genus, and it has been said that the *R. Ponticum* was the plant from whose flowers the bees of Pontus collected the honey that produced the extraordinary symptoms of poisoning described as having attacked the Greek soldiers in the famous retreat of the ten thousand. The flower buds of *Zygophyllum Fabago* are used as a substitute for capers, and the flowers of *Melianthus major*, a plant of the same order, are so full of honey that the natives of Good Hope, where the plant grows wild, obtain it for food by shaking the branches, when it falls in a heavy shower. *Coccoloba urifera* is remarkable for the peculiarity of the calyx, which becomes pulpy and of a violet color, whence the plant is called the sea-side grape. This pulpy calyx has an agreeable acid flavor and is edible. The flower stalks of *Hovenia dulcis* become extremely large and succulent, and are used in China as a fruit. It is said that in flavor they resemble a ripe pear. The flowers of the pumpkin were cooked and eaten by some of the tribes of the American Indians, especially by the Aztecs, by whom they were highly esteemed. The cauliflower, which has been known from remote antiquity, differs in a remarkable manner from all the other varieties of the cabbage tribe, whose leaves and stalks alone are used for culinary purposes. Instead of the latter being used, the flower buds and fleshy flower stalks, which form themselves into a firm cluster or head, varying from 4 to 8 inches or more in diameter, here become the edible portion and one of the greatest of vegetable delicacies. The flower buds of *Capparis spinosa*, a plant which grows on walls, etc , in the south of Europe, are pickled in vinegar in Italy and form what are commonly known as capers. These are chiefly imported from Sicily, though the plant is largely cultivated in some parts of France. The cloves of commerce are the unexpanded flower buds of *Caryophyllus aromaticus* (*Myrtaceæ*), a small evergreen, native of the Moluccas, but cultivated in several parts of the East and West Indies. Before the expansion of the flowers, which are produced in branched panicles at the extremity of the branches and are of a delicate peach color, the buds are collected by hand, or else sheets and mats are spread under the tree and the buds brought down by beating it with sticks. They are cleaned and then dried in the sun. A uniform brown color is imparted by slightly smoking them over a wood fire. The flower buds of *Calyptranthes aromaticus*, another plant of the same order, may be advantageously substituted. The flower buds and the berries of the myrtle (*Myrtus communis*) were eaten as spices by the ancients, and are still used in Tuscany instead of pepper. Long pepper is furnished by the immature spikes of flowers of *Chavica Roxburghii*, which are gathered and dried in the sun. In chemical composition and qualities it resembles ordinary black pepper and contains piperine.

## Some Old Time Herb Gardens.

This was the subject of a lecture by Prof. R. J. Harvey Gibson, delivered at a recent meeting of the Liverpool Chemists' Association: Herb gardens, said the lecturer, were in existence before the science of botany was known, or anything written about it; therefore a history of the herb and botanic gardens of the world formed a concrete exposition of the science itself. About the fourteenth century the old German herbalists began to seek in their own country for the plants mentioned by the ancient Greek writers, and these they catalogued in their herbals. In 1309 a garden was planted by Mathias Sabbaticus, attached to an old Benedictine monastery, which was, in fact, one of the early medical schools. The first real herb garden was planted in 1333, when it is recorded in the archives of Venice that the authorities granted a section of land, which was to be devoted to the cultivation of plants used in pharmacy; but all trace of it has now disappeared. The next herb garden of note, and it was a great one, was that of Padua, in 1545, and it is still in existence, but much enlarged and improved. A picture of this garden was thrown on the screen, showing the ancient portion (circular in form) in the center. At the University of Padua—the first to be established in Europe—they had a professor of botany. In the garden of Padua is still preserved the Palm of Goethe, which is now 300 years old. After this time a number of gardens were planted in the different cities of Europe. Notable among these were the gardens of Pisa, in 1547; Leyden, planted in 1577, and Montpelier, which is yet one of the finest on the Continent, in 1596. It was founded by Pierre de Belleval, and may be considered as the last of the old type of herb gardens. About the beginning of the seventeenth century many travelers, Italian principally, set forth to explore new lands and countries, and brought back specimens of strange seeds and plants to the various countries of Europe, and these often found their way to the old herb gardens. The great Jardin des Plantes of Paris was founded in 1547, and is still a very fine botanical garden. The first public garden of the kind in England was founded in London some time afterward, and is mentioned by Gerarde. It is supposed to have been situated somewhere near where the Holborn Viaduct now stands. The physic garden of Chelsea was the next, and was founded in 1677 by the Apothecaries' Society. In consideration for some of the land the Apothecaries' Society were to supply the Royal Society with 50 specimens of plants each year until 2,000 had been given. In the first catalogue 499 plants are included, all of which were used in pharmacy. Linnæus visited the garden in 1736. This great botanist's garden at Upsala was the first founded for purely educational purposes. To show the progress that has been made in the planting of botanical gardens, the lecturer described in detail the three great gardens of the world at the present time. First, he placed the Missouri Botanical gardens of St. Louis, in the United States. This garden is equipped with every modern scientific improvement, and was founded by Mr. Shaw, a native of Sheffield. It contains a fine herbarium, laboratories, and even a hotel, where 12 students are lodged. Second, he would rank the famous tropical gardens of Java, which covered 140 acres. These gardens are a marvel of luxuriance and beauty and are excellently managed and equipped. Almost every famous botanist of modern times had studied in the laboratory at Java. Third, he would place Kew Gardens, which no garden in the world rivaled in completeness; they cover 240 acres of land.

## Further Experiments with Wild Cherry Bark.*

By Dr. Alfred R. L. Dohme and Dr. Hermann Engelhardt,

Baltimore.

In a previous publication upon this subject† we stated that we would take up this work on a more extensive scale this winter in order to ascertain if there were any definite or even approximate rule as to the relative yield of hydrocyanic acid contained in the bark of old wild cherry trees (*i.e.*, brown or "rossed" bark), and in the bark of young wild cherry trees (*i.e.*, green or virgin bark). It will be remembered that Prof. A. B. Stevens of Ann Arbor found that the thick brown bark was richest, while our results indicated that the thin green bark was richest in hydrocyanic acid. In order to get a more general grasp of the subject, we obtained samples of *Prunus virginiana* from Dr. E. R. Squibb of Brooklyn, Prof. J. U. Lloyd of Cincinnati, and from three firms in the city, Muth Bros. & Co., Gilpin, Langdon & Co., and Higgins & Waters. To all of these gentlemen we wish to express our thanks for their courtesy. We at once sent a duplicate set of all of these samples to Professor Stevens and we await his results with them with interest.

### SOURCE OF THE SAMPLES.

Professor Lloyd's samples were gathered in Ohio, those of Higgins & Waters in New York State and the rest in Virginia and other Southern States. The samples of Professor Lloyd possess an additional interest in that they were all taken from one tree and from three parts of it, being 1, bark of root; 2, bark of tree, and 3, bark of twigs. The results obtained from them are not, strictly speaking, comparable with the brown and green classification, as the bark of the tree was also green and comparatively thin. We will hence put these in a series for themselves. The common bark sent by Dr. Squibb was old and brown to be sure, but old rather in the sense of having been stored a long time than in having been formed on the tree earlier.

### A CORRECTION.

It appears that in copying our results in the article published during the month of November,‡ we got the methods I and II, mixed. The figures for method I belong to method II and *vice versa*. This has no effect upon the conclusion in reference to the relative value of the two kinds of bark, but reverses the conclusion drawn as to the relative value of the methods employed. There is little difference, to be sure, in any case between the two methods given, but what difference there is points to the superiority of the titration over the gravimetric method, thus confirming what Professor Stevens observed in this particular. Besides the fact that it indicates more hydrocyanic acid, the titration method has the double

* *Pharmaceutical Review.*

† American Druggist, vol. 27, p. 251, and *Phar. Rundschau*, vol. 13, p. 260.

‡ American Druggist, vol. 27 (1895), p. 251 and *Phar. Rundschau*, vol. 13, p. 260.

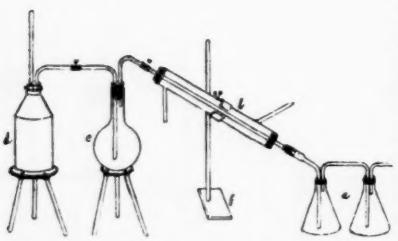
advantage of being more expeditious and much less troublesome. For this reason we have omitted entirely the results obtained by the gravimetric method of weighing the metallic silver which results from heating the silver cyanide in a reducing flame.

### THE GREEN THIN BARK THE RICHER.

Our results, as will be seen below, confirm those we obtained before and indicate that the green thin cherry bark is really richer in hydrocyanic acid than the thick brown bark, thus substantiating the "taste" test; for it is a well-known fact that the green bark possesses as a rule a stronger and more acid taste than the brown bark. The distillation was carried on as indicated by us in our former paper and we have become convinced that live steam at 100 degrees C. will drive every trace of hydrocyanic acid out of wild cherry bark in less than 20 minutes. The apparatus used is shown in the figure herewith.

### THE DISTILLATION.

*d* is a tin can half filled with water and closed by a two holed cork supplied with two glass tubes, one of which dips below the surface of the water and the other connects the can with a liter glass Flor-



EXTRACTION APPARATUS FOR WILD CHERRY.

ence flask *c* through a double-holed rubber stopper. The tube connecting the latter with the can dips below the surface of the liquid in the flask and the other tube in the flask connects it with the long Liebig condenser *b*, through which cold water is of course rapidly flowing during the process. The condenser is supported by a stout iron stand, *f*, being firmly clamped to the latter by an iron screw clamp. The end of the condenser tube is connected with a small Erlenmeyer flask, *a*, by means of a glass tube attached to it by a piece of rubber tubing, *e*, the glass tube, which is bent, dipping below the solution of caustic alkali contained in the flask. This flask is connected with another similar flask also containing caustic alkali solution and attached merely for safety's sake so as to catch and absorb any hydrocyanic acid that might pass through the first flask undissolved.

### THE ASSAY.

The assay is carried on as follows: 10 gm. of wild cherry bark, ground to a No. 40 powder, are allowed to macerate for 24 hours with 100 ccm. of distilled water in a 250 ccm. corked Erlenmeyer flask, shaking frequently. The entire contents are then washed into the liter flask *c* by means of distilled water and the flask *c* then securely corked with the two holed stopper already described. The water in the can *d* is then heated to boiling and as soon as steam comes over into the flask *c* this is also heated by a Bunsen burner placed under it. Distillation is continued about 20 minutes and the flask *a* then removed as well as the burner under flask *c*. Some of the distillate is then caught up in a clean test tube and the flask *a* again attached to the condenser by means of the rubber tube *e*. To the contents of the test tube a few drops of a solution of a mixture of ferrous and ferric salts are added, the mixture made alkaline with caustic soda until a permanent bluish-green precipitate is formed, and then heated gently. On adding an acid, to acid reaction, a light brown or a light blue color may result; in the former case there is no more hydrocyanic acid present and in the latter case there is still some hydrocyanic acid present. This reaction is capable of detecting hydrocyanic acid in dilutions of 1 to 50,000 parts of water.*

### THE TITRATION.

A decinormal solution of silver nitrate is made and an endiometer graduated to tenths of a cubic centimeter filled with it. The contents of both flasks *a* are poured into a large beaker and a decigram of sodium chloride added and dissolved in the liquid. The silver solution is added until a permanent milkiness results, due to the formation of silver chloride. Read off the number of cubic centimeters of silver solution used and multiply by two, as half of the potassium cyanide present is used up in dissolving the silver cyanide formed, to form a soluble double salt. From this it is easy to calculate the amount of hydrocyanic acid present. By this method the distillation proceeds under normal pressure, and hence temperature, whereas in Professor Stevens' method the thistle safety tube introduces a slight pressure resulting in a slightly higher temperature. This may not, however, affect the result. The main preference of our method with live steam is double saving of time, first because it actually occupies one twentieth of the time required to make a complete distillation by Professor Stevens' method, and second because one can perform other work while it is going on, while Professor Stevens' method requires constant watching for several hours.

### SUMMARY OF THE RESULTS.

Most of the barks examined are very poor, at least as compared with what we have examined previously, although as before stated, the bark of root of the samples from Professor Lloyd is normal or rather above the average.

THICK BROWN WILD CHERRY BARK.

| | Per cent. HCN. |
|---|---|
| 1. Squibb—"common bark" | a—0.0782 b—0.0831 |
| 2. Muth—"brown bark" | a—0.0636 b—0.0782 |
| 3. Lloyd—"bark of tree" | a—0.1760 b—0.1736 |
| 4. Higgins & Waters—"rossed bark" | a—0.1565 b—0.1565 |

THIN GREEN WILD CHERRY BARK.

| | Per cent. HCN. |
|---|---|
| 1. Squibb—"young bark" | 0.22 |
| 2. Muth "virgin bark" | 0.1418 |
| 3. G. L. & Co.—"green cherry" | 0.1565 |
| 4. Lloyd—"bark of twigs" | a—0.115 b—0.117 |
| 5. Higgins & Waters—"green cherry" | a—0.166 b—0.167 |

The results obtained gravimetrically, which we have not recorded, agreed with those obtained volumetrically, although in nearly all cases somewhat lower than the latter. We believe this is due to the fact that hydrocyanic acid does not as readily decompose silver nitrate as it does caustic potash and some may be lost on this account. As we cannot recommend the gravimetric process in any particular, and it gives lower results, we have discarded it entirely. A comparison of the yield of hydrocyanic acid from various parts of the tree prunus virginiana is shown in the table of results obtained from Professor Lloyd's three samples:

RESULTS WITH PROF. LLOYD'S SAMPLES.

| | Per cent HCN. |
|---|---|
| Bark of root of wild cherry | a—0.3423 b—0.3423 |
| Bark of tree of wild cherry | a—0.1760 b—0.1736 |
| Bark of twigs of wild cherry | a—0.1150 b—0.1170 |

This indicates very strongly that the bark of the root is richer than that of the tree and this in turn richer than that of the twigs.

If we leave out the samples of Professor Lloyd as not being gathered strictly in accordance with the thick brown and thin green requirement, since both were comparatively thin and green, and also the "common" bark of Dr. Squibb, which is hardly a thick brown bark, we must conclude as we did formerly* that the thin green or young bark is richer in hydrocyanic acid than the thick brown or older bark.

### PROFESSOR STEVENS' METHOD OF EXTRACTION NOT TO BE PREFERRED.

The two processes of distillation were tried on the same sample of bark in several cases and never once could we get as much hydrocyanic acid by Professor Stevens' method as we did by our own, although we distilled the same sample five times as directed by him. We further observed that practically all the acid came over during the first distillation, as all that came over during the second distillation required two drops of decinormal silver solution to completely unite with it and all that came over during the third distillation required but one drop of decinormal acid solution. Both of these quantities are practically insignificant. The fourth distillation yielded us no hydrocyanic acid. We hence conclude that the method using live steam, besides being simpler and more expeditious, is also fully as exact, if not more so.

Since this process of assay is so simple and easily manipulated, and since the above investigation has shown that the various parts of the plant vary so much in the amount of hydrocyanic acid they contain, and since the virtue of wild cherry bark is generally believed to reside in the hydrocyanic acid it contains, does it not seem rational to conclude that a hydrocyanic requirement and a process of assay for prunus virginiana are desirable additions to the United States Pharmacopœia? Whether or not wild cherry bark is a therapeutically valuable drug is another question and does not concern us, inasmuch as the drug is used to a very large extent and might as well be dispensed of a nearly uniform strength, since this can so readily be ascertained.

*Read the Review of the Wholesale Market and keep posted on prices. A dollar saved is a dollar gained.*

* *Beilstein's Handbuch*, Bd. I, p. 1411.

* Loc. cit.

## The Jaborandi Leaves of Commerce.*

By E. M. Holmes, F.L.S.,

Curator of the Pharmaceutical Society of Great Britain.

In this communication the author remarked that he was induced to take up the subject from a suggestion by the secretary. The history of this remarkable drug commences from 1874, when it was introduced into Paris from Pernambuco by Dr. Coutinho, and was identified by Professor Baillon as the leaflets of *Pilocarpus pennatifolius*, described 20 years previously by Lemaire, but without any knowledge of the fruits. On comparing the commercial leaves with those grown at Kew, Mr. Holmes observed certain differences which led him to suggest that they were probably derived from a distinct species more nearly allied to *P. selloanus*. The fruit of *P. Pennatifolius*, as well as the flowers of the commercial jaborandi, being unknown, the only evidence offered was that derived from the leaves and stems. Mr. Holmes pointed out in 1875 that the leaflets were more coriaceous than those of *P. Pennatifolius*, less tapering at base, and had the lateral veins more prominent on the upper surface; these leaflets turned brownish and not greyish on keeping. The histological characters were also different. In 1875 two forms appeared in commerce, which only differed in that one had glabrous and the other hairy twigs and leaves. Professor Planchon found that *P. pennatifolius* grown in Paris varied in the same manner. It may, therefore, be concluded that there are two forms of the same plant occurring in the same province, just as there are two similar forms of *Silene inflata* in this country.

In 1890 Mr. Holmes saw a jaborandi plant growing in the botanic gardens at Cambridge which presented the same kind of leaf as the commercial drug. On inquiry it was found from Dr. Craig that the seeds came from Bahia. When this plant flowered it was quite distinct from *P. pennatifolius*, having yellowish flowers suffused with pink across the center of the petals, the leaflets being usually in four pairs.

The habit of *P. pennatifolius* is that of a fine shrub between 5 and 6 feet high and bearing long, erect racemes of dark purple flowers, the leaflets being in two or three pairs. The Cambridge plant flowered when about 2 feet high and bore yellowish flowers and four pair of leaflets. The habit of this plant was more compact than that of *P. pennatifolius*. Having then obtained complete material, Mr. Holmes described the plant as a new species under the name of *Pilocarpus jaborandi*.

In 1875 the leaves and roots of a species of *Piper* were imported into this country, probably on account of a description by Dr. D. Parodi, in the *Revista Pharmaceutica*, of a jaborandi he referred to as *Piper jaborandi*.. These leaves are thin, papery, greyish, and tapering equally to both ends, and have not the characteristic oil cells of *Rutaceæ*. Peckolt gives *Piper citrifolium*, *P. nodulosum*, *P. unguiculatum*, *Artanthe mollicoma* and *Piper mollicoma* as being used as jaborandi. These leaves are generally mixed with stalks, which have the enlarged nodes characteristic of pepper.

* Read at a meeting of the London Chemists' Assistants' Association, November 28, 1895.

The leaves of the Pernambuco jaborandi had not been long in commerce when a large supply arrived in the London market from Buenos Ayres and Rio Janeiro which was distinctly poorer in pilocarpine. John Williams was the first to draw the author's attention to these leaves, which he believed had been collected in Paraguay. They were rather smaller than those from Pernambuco. The leaves had only two or three, never four pairs of leaflets. The leaflets of the Paraguay jaborandi were more tapered to the base, so that the widest part was above the middle, and the lateral veins were not prominent, the upper surface being greyish green, therefore it seemed to correspond well with the leaf of *P. pennatifolius*, which had been collected in Paraguay and Matto Grosso. The fruits corresponding to those grown by T. Hanbury.

There is little doubt but that this variety is *P. pennatifolius* exported via Rio and Buenos Ayres. For this kind Mr. Holmes proposed the designation Paraguay jaborandi.

The Paraguay jaborandi of commerce is, however, not uniform, some leaves being thin and tapering toward the base, with the veins on the upper surface not prominent; others are less tapering, with slightly prominent veins. It is evident, therefore that these jaborandis from Paraguay require more examination at the hands of a local botanist. In 1881 a false jaborandi appeared, but was not identified except that it was described as a rutaceous plant by Dr. Tschirch.

In 1893 a jaborandi appeared in Liverpool, and was first noticed by Mr. Wardleworth. It had small leaves similar to those of *Pistachia lentiscus*. The large oil cells and the microscopic structure readily distinguished it from the latter, and proved it to be a rutaceous plant nearly allied to *Zanthoxylum*. Dr. Stapf discovered among a parcel the inflorescence, which at once indicated that it was a *Pilocarpus*; it proved to be a new species identical with one sent to Kew from Rio labellled *Zanthoxylum*, and was called by Dr. Stapf *Pilocarpus microphyllus*, as it had the smallest leaf of any known jaborandi. It gives about 0.5 to 0.6 per cent. of an alkaloid similar to pilocarpine. This variety might be distinguished as the Maranham.

In 1894 another new jaborandi found its way to the London market. Its leaves were of a dark brownish tint on the upper surface and yellowish on the under, and were covered with short curved hairs. The fruit differed from any known variety, the ridges at the back of carpels being warty. These characters seemed sufficient to found a new species upon, and Mr. Holmes therefore described it—so far as was possible—in the absence of flowers under the name, *Pilocarpus trachylophus*, in allusion to the peculiarity of the carpels, and called it Ceara jaborandi. The leaves are identified by being smaller than those of *P. pennatifolius*, with recurved margins, smooth, dark, brownish green upper surface and pale yellowish under surface, and by the short curved hairs. According to Dr. Paul's analysis the leaves yielded 0.02 per cent. of crystalline nitrate, and when extracted by the caustic lime process only 0.012 per cent was obtained, indicating that the alkaloid was not pilocarpine.

The distinctive commercial names applied to the various jaborandis must not be taken to indicate that the leaves come only from those provinces, since it is only the ports of shipment that are known; where exactly the plants are collected is at present unknown.

Last week a new kind appeared, a simple leafed species, the leaves being about the size of *Laurus nobilis*, the upper surface polished with the veins scarcely visible; on the under surface they are more so, but very slender. The texture is papery, rigid and brittle, and they are of dark, brownish green color above and paler beneath. The purely lanceolate outline of the leaf readily distinguishes it. It is probably *P. spicatus*.

In view of the possibility of other species of this genus entering into commerce it would be, perhaps, as well to give an outline of the known species of the genus *Pilocarpus*.

This genus belongs to the tribe *Xanthoxylæ* of the *N. O. Rutaceæ*, and differs from the allied genus *Xanthoxylum* in the unbranched inflorescence and valvate æstivation of the petals. In *Xanthoxylum* the inflorescence consists of panicled cymes, and the æstivation is imbricate. The plants of the genus are distributed throughout tropical America, from Mexico and the West Indies in the north to Paraguay and Sao Paolo in the south, exteding eastward to New Granada and Matto Grosso. The species are imperfectly known, since the fruits have not in all cases been described. Up to the year 1885, from which the *Index Kewensis* dates, 16 species were known; since then two more have been published, viz.: *P. microphyllus*, *Stapf* and *P. trachylophus*, *Holmes*.

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## The Preparation of Monsell's Salt.

This salt, $FeSO_4 . (NH_4)_2SO_4 6H_2O$, is much used in volumetric analysis to titrate such solutions as $K_2Cr_2O_7$ and $K_2Mn_2O_8$, these being required for the determination of several pharmacopœial products, especially ferrous salts and reducing agents generally. The method usually to be met with in books (*vide* Sutton, ed. 1890, p 107), has not been a success in my hands, and acting upon the method for making ferri sulphas granulata, B.P., a product of a very satisfactory nature has been produced, which, like its prototype, is in a fine granular form, and assays 100 per cent. with pure bichromate. The plan adopted was as follows:

Take of—

| | |
|---|---|
| Ferrous sulphate | 278 grains |
| Ammonium sulphate | 132 grains |

According to this equation—

$$\underset{278}{FeSO_4 \cdot 7H_2O} + \underset{132}{(NH_4)_2SO_4} = \underset{392}{(NH_4)_2Fe(SO_4)_2\,6H_2O} + \underset{18}{H_2O}$$

These two sulphates are dissolved in a small quantity of cold water, the solution filtered if necessary, and warmed gently at 35°-40° C. to promote chemical action. Too great heat must not be used, or the solution will be decomposed with production of a ferric oxysulphate. The solution thus formed is poured into methylic alcohol, which precipitates the ferrous ammonium sulphate in fine granular crystals. These are collected on a calico filter, washed with a little methylic alcohol of the strength of proof spirit, and finally dried at a moderate temperature (35°-40° C.), or better, in the air, avoiding dust, etc.—*G. E. Westley in Pharmaceutical Journal.*

## The Camphor Industry.*

The island of Formosa, or, as named by the Portuguese, "the beautiful island," and known to China as Taiwan, signifying "terrace bay," is the place where most of the camphor of Western commerce is produced.

The island is a most productive one, alike rich in vegetation and minerals, but it is the geographical position which makes it a place of extreme importance with regard to the Eastern trade. Swatow, Amoy and Foo-choo lie within the Formosa channel, while every vessel bound to and from the northern ports and Japan must pass through it. The total value of the foreign trade of Japan is over $12,000,000, and of this Great Britain absorbs more than two-thirds. Of the many products of Formosa the chief is camphor, and the greatest part of this product is obtained from the wood of a tree, the *Campho'a officinarum*, belonging to the natural order *Lauraceæ*, but unfortunately the laurel grows only in certain districts in the island, chiefly in that portion not included within Chinese territory; it is mainly confined to the country of the aborigines and its immediate borders. In consequence of the disturbed relations between the races of the island, thus induced on the borderlands, the risk attending camphor collecting is very great, the distillers requiring to be always on their guard, for a Chinaman's head is a patent of nobility to an aborigine, for without one he is excluded from the council of his tribe, and owing to the disturbed state of affairs in the East generally camphor is likely to be a somewhat scarce commodity for months yet to come.

### THE DECLINE IN THE IMPORTS.

The trade returns for four months to April 30 last show only 4,785 packages imported into England, as against 13,204 in 1894 and 8,631 in 1893 for the same period. To such as are unacquainted with Formosa it is quite impossible to describe a virgin forest such as those met with in the island. The vegetation generally is characterized by tropical luxuriance, and in the mountain regions in the dense forests the various species of palms, aloes and the magnificent camphor trees are conspicuous—the last covers the whole line of mountains from north to south up to an elevation of 2,000 feet above sea level.

### THE CAMPHOR TREE.

The tree grows to a considerable height, sometimes as much as 50 feet, and has a girth of 20 feet, with branches of 8 or 9 feet in circumference—the leaves are smooth and the trunk is covered with a flat greenish bark—the whole, with the roots and wood, has a strong odor of camphor. This product is found to lodge everywhere in the interstices of the fibers of the wood, also in the pith, but most abundantly in the crevices and knots. From the dangerous circumstances connected with the collection of the drug there is a great possibility of its extinction, as the extraction of the camphor entails the destruction of the tree, and this destruction has never been compensated by replanting; so that the forests are being gradually cleared away, the aborigines receding, and the Chinese encroaching as the work of destruction has progressed. But, somewhat to counteract this evil, the laurel has received attention from experts and has now become naturalized in some of the warmer and tropical countries, such as Java, Brazil, Jamaica and the West Indies generally, Mauritius, Madeira and the Mediterranean region. It forms a large and handsome tree in sheltered spots in Italy, as far north as Maggiore; it may be found in the nurseries of Paris, and is not altogether unknown in England.

* The *British and Colonial Druggist*.

### COLLECTING CAMPHOR.

But it is Formosan camphor that we specially note, and it is a novel and exciting adventure to accompany a band of camphor merchants meaning business, taking our lives in our hands, as the whole work, from beginning to end, has to be done in an enemy's country, and that enemy of a relentless character. Preparations being duly made, not only for collecting and producing the drug but for our own sustenance and protection, the party sets out, the district having been prospected beforehand and the spots selected. The trees chosen are those remarkable for the abundance of their sap, many being too dry to repay the cost of time and labor. The best part of the wood is secured for timber, which is in much request for carpentry and cabinet work. The branches and refuse are then taken while freshly cut and chopped into small pieces for distillation.

### METHODS OF DISTILLATION.

The stills, built up in sheds, are of the simplest and rudest construction; these are moved as the advance is made from stage to stage, so that elaborate fittings would be cumbersome and out of place owing to this shifting at short intervals. About eight or ten fires are laid on the ground, over which is placed a long trough made of wood. This trough is lined with clay and half filled with water. Upon this boards are placed, pierced with holes which fit the trough, then rough jars are fixed containing the chips, which have been already prepared. These again are covered with inverted jars, and the whole made air tight by packing. The fires are now lit and the steam passes up through the holes in the boards. This soaks the chips in the jars and causes the sublimated camphor to settle in crystals on the insides of the pots from which it is scraped off and then passes through a second process of distillation in order to remove impurities. At the bottom of a copper still is placed a bed of dry powdered earth, if possible from an old wall—but this is not often get at able in a primeval forest—for the sake of the lime it contains, and on this is laid the crude camphor, this is again covered with earth, and so on alternately, until the vessel is full, the whole terminating with a layer of earth, which is finally covered with green mint. A second vessel, generally made of straw, smeared with clay on the outside, is placed over the still and luted on. This is then fixed over a fire and allowed to remain for a considerable time. After cooling, the camphor is found sublimed and attached to the upper vessel. When a sufficient quantity is obtained it is then packed in large vats or tubs provided with escape holes at the bottom, and through these holes exudes an oily liquid known as camphor oil, of a yellowish brown color. The exudation from the mass is to the extent of about 3 per cent. This liquid is of a very strong smell, and holds in solution an abundance of common camphor, which it deposits in crystals when exposed to a low temperature, its density being 0 910. By exposure to oxygen or the action of nitric acid it absorbs oxygen and becomes solid camphor. This oil is much used by Easterners as an embrocation in rheumatic diseases and bids fair to become a valuable European import as a cheap substitute for camphor liniment.

It is not, however, salable on the spot, as it is inferior to the Malagan camphor oil, from which it is distinguished by the odor of sassafras. In Japan the oil is used for lighting purposes by the poor folk, and it is said to be superior to kerosene both in cheapness as well as in illuminating power.

### HOW CAMPHOR REACHES THE MARKETS.

This product of the forest is shipped in a crude state from Tamsui, which is a free trade port at the northern extremity of the island, this being the characteristic export of the place, forming as it does the main supply of the European markets. From this place it is conveyed by native craft to various ports of China. Until the year 1868 the Chinese Government enjoyed a monopoly of the Formosan camphor trade; but it was then thrown open with very beneficial results. In 1870 and 1871 attempts were made to re-establish the monopoly under cover of a tax of less than a farthing per pound, in itself unimportant, but with the removal of the objectionable feature of the import the merchants have rested content. But as the supply of the trees and laurels in the island is being gradually exhausted, other countries have considered the matter, especially those adjacent.

### PRODUCTION ON THE CHINESE MAINLAND.

A small quantity of the drug is produced at Chinchew, in the province of Tokien, on the Chinese mainland. The method of preparation here differs somewhat from that of Formosa. The freshly gathered branches of the laurel are chopped into small pieces and steeped for some days in water, they are then boiled in a suitable vessel, being continuously stirred with a stick until the grains adhere to it in the form of a white jelly. The fluid is then poured off into glazed vessels and allowed to rest for some hours, when the camphor is found in a concreted mass. In Japan the laurel is found in the three principal islands. It flourishes best in the southern portions of the empire, Toza and Sikok. The mild damp sea air favors its growth, and the principal preparation of the drug is carried on in these localities. Japanese camphor is distinguished from Formosan by being coarser grained, clearer, of pinker hue, and by subliming at a lower temperature.

It is also known as "Dutch" or "tub" camphor, the latter name arising from its being imported into Europe in tubs covered with matting, each placed within a second tub secured on the outside by hoops of twisted cane. No metal lining is used, and the camphor is thus drier than the Formosan. Each tub holds about 1 to 1¼ hundredweight. The selling price is nearly twice as high as the Formosan, and the imports to Europe are about as 1 to 6.

### THE REFINING OF CAMPHOR.

In India the refining of common camphor is a process of itself. The oil is absorbed by means of quicklime. Two earthen pots are luted together, having a small aperture for the escape of the air

on the first application of heat. Camphor is mixed with water in proper proportions and put into a copper still; more is added and a copper lid is then put on, and to make it perfectly tight an iron bar is passed throught it and the vessel by holes made for the purpose. The still is then lifted by handles and set on an earthen *chula*, below which fires are burning. The lid and edges of the still are smeared with wet clay which is piled up into a cone. In about 15 minutes steam comes through the hole where the bar goes, whereupon a cloth attached to a bamboo is dipped into a receptacle filled with water and mopped over the clay cone on the still, so that the water keeps the upper portion cool. This is maintained for three hours, when the sides of the still are beaten by a stick. If this produces the sound of an empty vessel it is known that the process of sublimation is complete; the still is then removed from the *chula* and the lid is opened. The camphor is found in a thick crust lining the upper part of the sides of the still. It is divided into four pieces by a knife then packed, and is ready for the market. Such is the Indian process.

The refining of camphor was for long confined to Venice, but it is now carried on in England, Holland, Hamburg and Paris, the product being much finer and purer than that obtained by crude processes such as that described.

NGAI CAMPHOR.

One other kind of camphor still remains to be mentioned—that is Ngai camphor. This is manufactured at Canton and in the island of Hainan. The plant from which it is obtained being the *Blumea balsamifera*, called in Chinese, Ngai, abundant in tropical Eastern Asia. As this product is about 10 times the price of Formosan camphor it never finds its way into Europe as an article of trade.

It is consumed in China, partly in medicine and partly in perfuming the finer kinds of Chinese ink. The export of this camphor by sea from Canton is valued at about £3,000 per year. It is also sent from Kiung-chow, in the island of Hainan.—*The Produce World.*

# QUERIES AND ANSWERS

*We shall be glad, in this department, to respond to calls for information bearing on pharmacy or any of its allied topics, and cordially invite our friends to make use of this column.*

*When sending for the formula of any unusual compound, the query should be accompanied with information regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, a specimen of the labels used on packages of the compound should also be sent.*

**Effect of Large Doses of Acetanilid.**—W. P. S.—Large and continuous dosage of this drug would, according to Professor Hare, bring about congestion of the liver, kidneys and spleen, followed by death. After the injection of a poisonous dose the lips become blue, the face livid, cyanosed, expressionless or anxious. The forehead and cheeks become covered by beads of sweat, which gradually extend over the rest of the body. Acetanilid is said to be cumulative in its action, but poisoning from prolonged use of the drug rarely happens.

**Honey and Almond Cream.**—H. W. B. and C. A. W.—We cannot furnish the formula of the proprietary compound you ask for. A preparation corresponding to the title given is made as follows:

HONEY AND ALMOND CREAM.

| | Parts. |
|---|---|
| Ointment of rose water, U. S. P. | 5 |
| Oil sweet almonds | 5 |
| Glycerin | 5 |
| Boric acid | 5 |
| Solution of soda, U. S. P. | 12 |
| Mucilage of quince seed (2 drs. to 1 pt.) | 25 |
| Water, sufficient to make | 200 |
| Oil bitter almond, | |
| Oil rose, of each sufficient to perfume. | |

Heat the ointment, oil and solution of soda together, stirring constantly until an emulsion is formed; then warm together the glycerin, acid, mucilage and about 150 parts of water, mix with the emulsion, stir until cold, and make up to 200 parts by adding more water. Lastly add the perfume.

**Sanguinol.**—Ch. E. B.—The composition of this article is a secret of the manufacturer, and we hardly think it would be possible for us to induce him to make it public. We regret our inability to help you in the matter.

**Brown Hair Dye.**—C. R. B. asks for the formula of a preparation that will restore bleached blond hair to its original light brown color.

Bismuth is said to give the best results in cases of this kind, the following formula being used:

I.

| | |
|---|---|
| Bismuth citrate | ʒ j |
| Distilled water | fl. ʒ ij |
| Rose water | fl. ʒ ij |
| Alcohol | ʒ v |
| Ammonia water | q. s. |

II.

| | |
|---|---|
| Sodium hyposulphite | ʒ xij |
| Distilled water | fl. ʒ iv |

Solution No. 1 is first applied to the hair with a brush, and solution No. 2 afterward.

Lead is also useful as a constituent of brown hair dyes, the acetate being the salt commonly employed. We quote the following from a collection of recipes:

| | |
|---|---|
| Lead acetate | ʒ ij |
| Sodium hyposulphite | ʒ j |
| Glycerin | fl. ʒ ij |
| Rose water | fl. ʒ xiv |

The lead and sodium salts are dissolved in separate portions of the water, and filtered; then they are mixed, and the glycerin is added.

**Mumly Graw.**—S. E. F. asks if there is such a thing as Mumly Graw. He also tells us incidentally that he has had an order for "5 cents worth of Jobe Stears Beads."

**Books to Study Pharmacy.**—E. McF. writes: "Please say which books are best for a young man to learn pharmacy from preparatory to entering college, and the cost of same."

Inquiries of this kind are constantly being received and as constantly answered in these columns. Presuming that our correspondent is equipped with the rudiments of a general education, we should recommend him to procure copies of such works as Attfield's Chemistry ($2.75), Caspari's Pharmacy ($4.50), Oldberg's Home Study in Pharmacy ($3), and the U. S. Pharmacopœia ($2.75) and maintain his subscription to the AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD, in the pages of which he will find from time to time suggestive papers dealing with the examination questions set by the various boards.

Latin should be studied during the first two years, and for this purpose Robinson's "Latin Grammar of Pharmacy and Medicine" ($2) is a book to be recommended.

## Quiz Box.

### Answers to Questions.—Eleventh Series.

101.—Acacia. A gum derived from the Acacia Senegal; habitat, East Africa and Senegal.

102.—Anthemis. The flower heads of Anthemis nobilis; habitat, Southern and Western Europe.

103.—Aspidosperma. The bark of Aspidosperma Quebracho-blanco; habitat, South America.

104.—Aurantii Amari Cortex. The rind of the fruit of the citrus vulgaris; habitat, Southern Europe, West Indies and Southern Florida.

105.—Calamus. The dried rhizome of acorns calamus; habitat, North America and Northern Asia.

106.—Capsicum. The dried ripe fruit of Capsicum fastigiatum; habitat, the tropics of both hemispheres.

107.—Cassia Fistula. The pods of Cassia Fistula; habitat, East and West Indies.

108.—Castanea. The leaves of castanea dentata; habitat, Western Asia and Eastern United States.

109.—Colchici radix and Colchici semen. The corn and the seed of Colchicum autumnale; habitat, Southern Europe.

110.—Conium. The full grown fruit of conium macutatum.

# Student's Column.

## Organic Materia Medica of the U. S. P.

(*Continued from page 303. Vol. XXXVII.*)

**Scammonium.** Scammony.

BOTANICAL NAME...Convulvulus scammonia.
NATURAL ORDER....Convulvulaceæ.
HABITAT.....Western Asia.
CONSTITUENTS.....Resin and gum; the former scammonin.
PROPERTIES.....Hydragogue, cathartic.
PARTS USED.....The resinous exudation from the living root.

**Dose**—Gm. 0.06–0.3; **Resin,** 0.06–0.3.

**Scilla.** Squill.

BOTANICAL NAME...Urginea maritima.
NATURAL ORDER....Liliaceæ.
HABITAT.....Mediterranean coasts of Spain, France, Sicily and Africa.
CONSTITUENTS..... Active principles: Scillipicrin, scillitoxin, scillin; glucoside scillain; also contains mucilage, sugar and calc. oxalate.
PROPERTIES.....Expectorant, diuretic and cathartic.
PARTS USED.....The bulb, sliced and dried.

**Dose**—Gm. 0.03–0.3; **Acetum,** Cc. 1–2; **Ext. Fld.,** Cc. 0.20–0.30; **Tinct.,** Cc. 0.60–1.30.

**Scoparius.** Broom.

BOTANICAL NAME...Cytisus scoparius.
NATURAL ORDER....Leguminosæ.
HABITAT.....Western Asia and Great Britain.
CONSTITUENTS.....Volatile oil, scoparin, sparteine, tannin, wax, etc.
PROPERTIES .....Diuretic and cathartic.
PARTS USED.....The tops.

**Dose**—Gm. 1–2 in decoction; **Ext. fld.,** Cc. 1–4.

**Scutellaria.** Scutellaria; skullcap; hoodwort; madweed.

BOTANICAL NAME...Scutellaria lateriflora.
NATURAL ORDER....Labiatæ.
HABITAT.....North America.
CONSTITUENTS..... Bitter principle, glucoside, volatile oil, tannin, sugar.
PROPERTIES.....Tonic, nervine, antispasmodic.
PARTS USED.....The herb.

**Dose**—Gm. 2–4; **Ext. fld.,** Cc. 4–8.

**Senega.** Senega; seneka root.

BOTANICAL NAME...Polygala Senega.
NATURAL ORDER....Polygalæ.
HABITAT.....United States.
CONSTITUENTS.....Polygalic acid, senegin, methyl salicylate, sugar, etc.
PROPERTIES.....Expectorant, emetic.
PARTS USED.....The root.

**Dose**—Gm. 0.2–1.5; **Ext. fld.,** Cc. 0.30–1.30.

**Senna.** Senna.

BOTANICAL NAME...Cassia acutifolia and cassia angustifolia.
NATURAL ORDER....Leguminosæ.
HABITAT.....Eastern and Central Africa and India.
CONSTITUENTS.....Chrysophan, cathartic acid, sennit (cathartomannit), sennacrol, mucilage, etc.
PROPERTIES.....
PARTS USED.....The leaflets.

**Dose**—Gm. 8–15; **Conf.,** Gm. 8; **Ext. fld.,** Cc. 4–8; **Inf. Comp.,** Cc. 64–128; **Syrup,** Cc. 4–16.

**Serpentaria.** Serpentaria; Virginia snakeroot.

BOTANICAL NAME...Aristolochia Serpentaria and aristolochia reticulata.
NATURAL ORDER....Aristolochiaceæ.
HABITAT.....United States.
CONSTITUENTS.....Volatile oil, aristolochine, tannin, mucilage, resin.
PROPERTIES..... Stimulant, diaphoretic, tonic.
PARTS USED..... The rhizome and roots.

**Dose**—Gm. 0.3–2; **Ext. fld.,** Cc. 0.30–1.30; **Tinct.,** Cc. 4–8.

**Sevum.** Suet; mutton suet.

ZOOLOGICAL NAME..Ovis Aries.
ORDER .....Ruminanta.
HABITAT.....Domesticated.
CONSTITUENTS.....Stearin and palmitin.
PROPERTIES.....Lenitive.
PARTS USED.....The internal fat of the abdomen.

**Sinapis Alba.** White mustard; yellow mustard.

BOTANICAL NAME...Brassica alba.
NATURAL ORDER....Cruciferæ.
HABITAT.....Southern Europe and Western Asia.
CONSTITUENTS.....Fixed oil, proteid substances, sinalbin, sinapine sulphocyanide.
PROPERTIES. .....Tonic, laxative, diuretic, externally rubifacient and epispastic.
PARTS USED.....The seed.

**Dose**—Gm. 1–4.

**Sinapis Nigra.** Black mustard.

BOTANICAL NAME...Brassica nigra.
NATURAL ORDER....Cruciferæ.
HABITAT.....Southern Europe and Western Asia.
CONSTITUENTS.....Fixed oil, sinigrin, sinapine sulphocyanide, volatile oil derived from sinigrin.
PROPERTIES.....Similar to Sinapis alba.
PARTS USED.....The seed

**Dose**—Similar to Sinapis alba.

**Spigelia.** Spigelia; pinkroot; Maryland pink.

BOTANICAL NAME...Spigelia marilandica.
NATURAL ORDER....Loganiaceæ.
HABITAT.....Southern United States.
CONSTITUENTS.....Volat. alkaloid, spigeline, volatile oil, resins, bitter principle
PROPERTIES.....Anthelmintic, purgative.
PARTS USED.....The rhizome and roots.

**Dose**—Gm. 1–4; **Ext. fld.,** Cc. 4.

(*To be continued.*)

## Examination Questions of the Tennessee Board of Pharmacy.

### PHARMACY.

1. State exactly how you would prepare a blister plaster 8 x 10 inches.

2. Should a physician ask you to prepare 60 ccm. of a palatable liquid mixture, containing one grain of sulphate of quinine to each 4 ccm., state how you would prepare it, and what quantities of each ingredient you would use.

3. If you had a prescription for pil. hydr. prot. iod. o. ol. No. XXX, what equivalent strength would you dispense if yours were not so marked?

4. (*a*) If you were called on to dispense the following, state in plain terms how you would prepare and how much in apothecary's weights and measures you would use of each? (*b*) What price would you put on it?

| | |
|---|---|
| Eserin sulphate | 0.03 |
| Morphia sulphate | 0.06 |
| Zinc sulphate | 0.03 |
| Acid boric | 0.65 |
| Aq. dist. ad | 30.0 |

S. eye drops.

5. State in your own words how you would prepare an ointment of belladonna containing 48 grains of the extract to the oz. of benzoinated lard.

6. (*a*) State in your own words how you would prepare an emulsion of turpentine. (*b*) Give the names of all the official emulsions you can.

7. (*a*) Fold a filter paper and inclose it with your answers with your number marked on it. (*b*) State for what purpose it would be used in pharmacy.

8. State in your own words how you would proceed to pack a percolator.

9. (*a*) What articles would you use in making oleate of morphine? (*b*) How much of each would you use to make 1 oz. of 6 per cent. solution? (*c*) What is the manner of procedure?

10. State the dose of the following drugs:

Potass. acet.
Tr. gelsemium.
Hydrarg. chlor. mit.
Infus. digitalis.
Argenti nitras.
Aq. amygdal. amara.
Santonine.
Sodium bromide.
Potass. iodide.
F. e. gossypium.
Vin. colchici sem.?

### CHEMISTRY.

1. (*a*) What is meant by the term chemical affinity? (*b*) When are substances said to be incompatible? (*c*) Name an example to illustrate each.

2. How can the presence of iron in glycerin be detected?

3. Give characteristic test for free iodine in solution.

4. What is the source of (*a*) acid citric, (*b*) acid tannic, (*c*) acid tartaric, (*d*) acid oxalic, (*e*) acid boric?

5. Give a chemical test to distinguish ammonium bromide from potassium bromide.

6. Describe (*a*) phosphorus, (*b*) chlorine, (*c*) sulphur. (*d*) How are they found in nature?

7. Define (*a*) acid, (*b*) alkali, (*c*) state the difference between a ferrous and a ferric salt, (*d*) between a sulphide, sulphite and a sulphate.

8. (*a*) Name four corrosive acids, (*b*) state what their salts are called.

9. (*a*) What is an element? (*b*) About how many of them? (*c*) Name one that is a solid, one a liquid and one a gas.

10. (*a*) What is the difference between distillation and sublimation? (*b*) Write the names of the following: $HNO_3$, $KClO_3$, HCl, $H_2SO_4$, $HgCl_2$.

### MATERIA MEDICA.

1. Give habitat of (*a*) ergot, (*b*) ipecac, (*c*) digitalis, (*d*) buchu, (*e*) senega.

2. Give botanical name of (*a*) aconite. (*b*) ladies' slipper, (*c*) henbane, (*d*) black cohosh, (*e*) digitalis, (*f*) peppermint.

3. What are the ingredients in (*a*) Basham's mixture, (*b*) neutral mixture, (*c*) citrate magnesia, (*d*) comp. liq. powder, (*e*) blue mass?

4. Write the common name of (*a*) myristica. (*b*) spigelia, (*c*) marrubium, (*d*) eupatorium perfoliatum, (*e*) triticum repens, (*f*) taraxacum, (*g*) quercus alba, (*h*) krameria, (*i*) ol. theobroma, (*j*) succus limonis.

5. What part is used of (*a*) anisum, (*b*) viburnum prunifolium, (*c*) ecbalium elaterium, (*d*) anthemis, (*e*) papaver somniferum.

6. (*a*) From what is opium obtained? (*b*) What per cent. of morpine should it contain? (*c*) Name three liquid preparations. (*d*) Give the dose of the three named. (*e*) Name its alkaloidal salt most generally used. (*f*) What is the dose of that salt?

7. Give official names of (*a*) Rochelle salt, (*b*) blood root, (*c*) carbolic acid, (*d*) tartar emetic, (*e*) yellow wax, (*f*) blue cohosh, (*g*) mandrake.

8. What are the medicinal properties of (*a*) potass. iodide, (*b*) ipecac, (*c*) strychnine, (*d*) hoarhound, (*e*) cod liver oil, (*f*) cascara sagrada, (*g*) boric acid?

9. Give antidote for poisoning by (*a*) aconite. (*b*) morphine, (*c*) arsenic, (*d*) corrosive sublimate, (*e*) oxalic acid.

10. Name a drug in common use obtained (*a*) from a vegetable source, (*b*) from an animal source, (*c*) from a mineral source (*c*) State what each is used for in medicine.

# BUSINESS HINTS

## Advertising Aid, how, when, and where to Advertise.

**PRACTICAL HINTS AND SUGGESTIONS. CRITICISM AND CONSTRUCTION OF ADVERTISEMENTS.**

**In Charge of Ulysses G. Manning.**

The department editor will be pleased to criticise any advertisements submitted and to suggest improvements. Questions answered and advice given. Our readers are cordially invited to avail themselves of this help.

### SPACE, POSITION AND DISPLAY.

SEVERAL druggists who contemplate newspaper advertising this year have asked how much space they should use. No definite rule can be given, as there are several things to consider in the matter The first is cost.

HOW MUCH TO SPEND.

I advise new advertisers to put from 1 to 2 per cent. of their gross sales into advertising. As they gain in experience and skill they can increase their appropriation. It will be well to remember that good advertising is not an expense, but an investment, and that the more invested the larger returns will be. But until you are sure that you are doing *good* advertising a conservative course will be wise.

Therefore a perfectly safe plan is to determine just how much you can afford to spend as an experiment and then strive to make this fund reach as far as possible.

HOW MUCH SPACE.

In determining the amount of space to use other considerations frequently enter: The size of your store, the volume of business and the ads. of your competitors. The larger the store or business, the more help employed, the larger the ad: should usually be. The size of the ad. itself may have an influence, as the following will illustrate:

Suppose there were three dry goods houses in a town and that the stocks, facilities and volume of business of the three were about equal. Let two of these houses use quarter page ads. and the third 4 or 5 inches single column. Were you, unacquainted with the facts in the case, called on to form an opinion of the stores from a survey of the local papers, what would your conclusions be?

People naturally expect the size of the ad. to bear some relation to the size of the business.

If, however, your competitors use no space at all, this feature need not be considered. If they use a little space and you can afford more, take it, and secure the advantage that the larger space affords. If you have been an advertiser long enough to feel sure of your ground, don't be afraid of large space. Use just as much as you can keep filled with interesting and effective matter.

The almost unanimous opinion of those who know most about advertising is that when a small space pays, a large one will pay more than proportionately better.

THE QUESTION OF POSITION.

After space comes the important question of position. A small ad. in a good position is frequently worth more than a large one in an obscure corner of the paper. As most druggists use a moderate amount of space only, the question of position becomes an important one. In many cases position can be had for the asking; in more cases for the insisting, and, where neither of these avail, the payment of an additional 10 or 15 per cent. will get it. It is usually worth what it costs for a small advertiser.

WHAT IS GOOD POSITION.

The best pages in the smaller weeklies and dailies are apt to be the ones bearing the local news or editorial comment. The best position is top of column next to reading matter. The next best is as near the top as you can get—always next to reading.

When you take up a paper your eye goes to the top of the page. It is where you look for headlines—where you usually commence to read. An ad. up there is apt to get in the range of vision about as many times as there are columns of reading matter.

With your ad. next to reading matter the peruser of the paper has to brush against it as he travels down the column, and is liable to absorb some of its information whether or not he gives it a careful reading. Having secured your space, let it be understood that the position is to be unchanged.

DISPLAY.

With your space chosen, study your surroundings and endeavor to make your ad. distinctive in some way. It will be simply a matter of contrast. If borders are scarce in the paper use one. If the other advertisers employ borders largely, don't use one, but have your ad. set with plenty of white space around it. A distinctive style of setting should be maintained. Have something about the ad.—border, setting of firm name or catch phrase—remain unchanged so that people can recognize your ad. at a glance. The very sameness about some feature helps to attract attention when you change the matter of the ad. The eyes of even casual readers receive some sort of an impression. The arrangement of types, borders, etc., becomes at least a faintly recorded image. Let a change take place. The eye detects something wrong. An inquiry is instituted.

Suppose you daily pass a man who habitually wears a black necktie. This may go on for weeks or months, and you scarcely notice him. One day he appears with a scarlet tie. Then your attention is attracted. You see not only the tie, but the man. If, by the time you have become used to the change, he flashes out in green, you can make up your mind that he is one of the objects you are going to see hereafter whether you will or not.

### COMMENT AND CRITICISM.

ADVERTISING IN A CUT RATE TOWN.

W. A. T. says: "I send copy of paper containing my ad. and ask you to kindly criticise same and make suggestions as to its improvement. Our town has 15,000 population, is near the city of ——, and contains seven drug stores. I began advertising 14 months ago, and find that my trade has increased somewhat. I have not given advertising much attention until lately. A cut rate war exists here and the various stores are endeavoring to undersell one another."

Three other druggists advertise, and the paper has grouped all the ads. in one column. It would be well for "W. A. T." to either change his location or strive to make his ad. so conspicuous as to completely overshadow the others. In its present position it is bound to lose some of its value through proximity to the others. This ad is the largest, stands at the head of the column, and is the best of the three; but owing to similar style of setting, the reader is apt to wander on down the column.

It would be a good plan to change the space to 3 inches double clolumn and put a border around it. Then for headlines use the largest type on the page. The body of the ad. can be set in ordinary sized type. Don't attempt to say too

much. The ad. submitted contains enough matter for two.

Don't talk "sassy." This ad. sounds as though it were addressed chiefly to your competitors. It is the public you are after.

ADVERTISING CUTTING.

Don't harp on cut prices on patent medicines all the time. If there must be cutting, go to the bottom to begin with. Quote one article at cut rates in each ad., and say that all the rest are sold at like prices. Let a single decisive sentence tell that you are a leader in prices and then talk quality, service—and goods on which you can make something.

Where all competitors are shouting themselves hoarse on cut prices, the man who keeps cool has a chance to make a point by quietly insisting that low prices are a matter of course at his store and that quality of goods and reliability of service are equally a matter of course. Dignity and downright earnestness win in ads., and if you once impress the public with the idea that you are not engaged in the general *melée* because you have to, but because you want to, you have gained much.

There is something hysterical about the announcements of many of the cutters that tells plainly enough that they would like mighty well to be doing something else. People may not reason it out, but they will feel instinctively the insincerity, just the same.

DON'T ADVERTISE YOUR COMPETITORS.

If you must cut prices and advertise them, do it as though there was not a competitor in the world Ignore every one. If you let anything creep into your ads. that sounds as though some one was worrying you, you have made a mistake. You direct attention to your rival—to his ad perhaps—and that's bad judgment.

Hope need not die when cutting begins. It is not as serious as it looks if you meet it firmly. A condition that levels the profits on an important portion of your stock may be a serious menace for a time, but does not necessarily presage ruin. It means, first of all, that you must sell other things as hard as you can. Cutting has been the making of some stores—lifted them out of a rut and awakened dormant capacities. It has been found that stores could live and thrive with "patents" left out of the question entirely. Cut rates have the effect of stimulating trade to a small extent, and by judicious management this can be made to help the sale of the entire stock.

DON'T CUT IF YOU CAN HELP IT.

Not that I advise cutting. Far from it! Cutting is a two-edged sword and is a dangerous weapon at best, and has often involved all parties concerned in common ruin. I simply believe that its evils are exaggerated and that it is often ruinous because druggists believe that it must be.

Setting aside my wishes in the matter, my convictions are that the evil will never be overcome. Efforts to suppress it are in opposition to natural laws—to laws of trade—and in the end will be as futile as an effort to make water run up hill. Its continuance in spite of all efforts to suppress it is a harbinger, it seems to me, of new conditions in the drug trade The tendency of the times is toward smaller profits and larger volume of sales, toward the annihilation of the small dealer and the upbuilding of the large one. The drug business has been affected last on account of its professional features; but I doubt if it will long escape.

However much we may deplore this, we must face conditions as we find them. There are too many drug stores. Competition is doing its worst. What is the end likely to be? Whatever changes come, advertising is to be an important factor, just as it has been in other lines. Those who master its principles now need have little fear of the changing time.

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CIRCULAR ADVERTISING.

R. H. Venable, Louisville, Ky., sends copies of two circulars—one distributed when he opened his store, the other some time later. The chief defect of these circulars is the quality of paper employed. It is but ordinary print paper, and as the matter is rather crowded the circulars are not as attractive as they should be. The talks are fairly good, though too much ground is covered.

Circulars to be most effective should not attempt to tell about the whole store. It is better to take one department or feature at a time and leave the rest for other circulars to be distributed at short intervals. Mr. Venable makes a special point of the neatness of his store. This is right, for there are a lot of things that go with neatness that are especially desirable in a drug store. A neat store demands a neat circular, and a little extra expense in this direction will always pay. The circular confined to prescriptions and soda water is the better of the two.

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PENNSYLVANIA ADVERTISING.

The City Drug Store, York, Pa., sends a circular, a newspaper ad. and a folder. The folder is the best of the three. It consists of four pages on tinted cardboard. It contains almost too much matter, and would have been better had the attack on patent medicines been omitted. To state that patents are sold at cost, then attack them, and follow it up with the information that you recommend a line of your own remedies, all in the same breath, may create an impression that the advertiser did not anticipate.

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A HOLIDAY ADVERTISEMENT.

Dr. W. A. Wright, Barnesville, Ga., submits a holiday ad. for criticism. This advertiser has a first-class position on local page, and his ad. is the most conspicuous in the paper. He uses a striking border, the ad. is well set and I am sure that all the readers saw it. It is rather too general in character, but has little else in it to criticise.

When so heavy a border is used around a double column space it is well to allow at least ½ inch of white space around the ad. I would suggest a still larger head line, with the body of the ad. in smaller type. This would make the head line more prominent by contrast and the saving of space would permit the white margin. Headings can be set in two lines if necessary.

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Considerable matter is at hand for criticism in the next issue.

Owing to the amount of material sent in, correspondents must not look for a reply under a month's time. Matter for critical comment receives attention in the order in which it arrives. I am glad to see it come, and will give it attention as early as possible.

## Humor in Advertising Signs.

Twenty-third street had its usual crowd of holiday shoppers, says the New York *Press*. All was bright and merry, and pretty things filled every window. Into the throng of happy people there came a tramp clad in the miserable rags of his order. He had a woeful expression and he was evidently mingling in the crowd to see sights which would remind him of the time when he, too, bought presents for loved ones. The crowd drew away from him.

"The fools! they think I want to beg, and even grudge me a chance to see a smile," he muttered; "but I shall make them laugh for my own pleasure."

He came near a trunk store, and in a heavy, husky voice read aloud the placard posted on the trunk: "This size for $5."

"So do I," he added.

The crowd laughed and listened.

"Ladies and gentlemen, there's more humor in signs than in funny papers." he said. "Look at that one in Sixth avenue: 'Suits pressed while you wait for a dollar.' Let's all wait."

But they didn't. The people followed the tramp as he sauntered up the avenue.

"Git on to his nibs with the fur lined throat," was the comment of a bootblack.

"How clever; awfully so, don't you know. It must be Walter Jones, parading as Weary Raggles," said a matinee girl to her youthful escort. "Let's hear what he says, Willie. Your mamma won't care if we are a little late. Oh, now he's going to talk again."

"Here's a type written notice," began the fellow, as he scanned a sheet of paper tacked near the foot of a steep stairway, "and it reads, 'Hands wanted on ladies' garments. Apply at room No. 15, fourth floor, back.'"

The matinee girl bit her lip, the men smiled and the street gamin shouted, "Youse can't get a job there, Pop."

"'Divided skirts for ladies with wheels'" was the next sign he read, and with a wink at Mary and John, who were holding hands, he added, "They've all got 'em."

Then a book store window attracted his attention. "Now, here's a firm stocked up with books, and surely they know how to write their signs. Let's gaze into their window. 'A little life of Napoleon on the inside.' 'All Dickens in seven volumes.' 'Tennyson in a box for $2.'"

But the crowd didn't take to books, he noticed, so he continued his walk, reading aloud such signs as these: "Dress suits to hire." "Shoes repaired while you wait." "Teeth pulled while you wait." "A—a—a—a" he hesitated, and nudged the man nearest to him and walked on. It was not a long sign, and read: "Get the lady to manicure your nails for a quarter."

A policeman came along and was about to scatter the people, but changed his mind and smiled with the others when the tramp read in his happiest style the sign over the music store, "Musical instruments playing a thousand tunes at factory prices." Above the store was a stock broker's office. The letters in his sign were of enamel, and, as so often happens, one letter had dropped from its place on the window glass. All laughed

when the tramp read: "Money loaned on socks."

Next the tramp looked into a chop house window, but said he didn't care to eat, for the sign on the window read: "Half fresh mackerel 20 cents."

Adjoining the restaurant there was a store occupied by a dealer in sanitary woolen undergarments, and in the window there was a dummy, dressed in a moustache and a combination suit. A glass plate, on which was printed "Notary Public," hanging from the figure's arm, caught the tramp's eye. "I wonder when he was appointed."

Looking at a large canvas stretched across the front of a dry goods store the tramp read, "$1 here equals $2 elsewhere," and then he added: "Let's go elsewhere and get the two. But hold, here is a superfluous use of words: 'Wild geese feathers marked down.' I wonder what you would mark feathers if you didn't mark 'em down."

"Beefsteak John keeps this place. This place keeps Beefsteak John," was the next sign that Raggles pointed out to the crowd, and then they gathered in front of a paper store. In one window a string of paper dolls hung ready to be dressed in paper dresses, while across the plate glass, just under the row of tiny figures, enameled letters spelled this word: "Stationery." The tramp said: "It's a good thing they are in this part of the town, or they'd be kept moving."

## Druggists' Rubber Sundries.

Cheap goods are beginning to menace the druggists' sundries trade, according to a prominent New York druggist. "The discounts which different concerns quote to us," he said, "vary all the way from 30 to 80 per cent. on what purport to be the same goods. Of course we know this to be impossible, but there are always beginners in the drug business who don't know how to judge of rubber goods, and there are always beginners in the buying of such goods for consumption, and these naturally are caught by the cheaper prices. Then the dry goods stores are helping to injure the trade in druggists' sundries, by buying large quantities of goods at 80 per cent., or similar discounts, that are necessarily of poor quality. This explains why the department stores can offer one-quart fountain syringes at 39 cents, while our price is nearer $1, and was until lately $1.25. We keep samples of these low-priced goods in stock, however. When a customer talks about being able to buy so cheaply elsewhere, we say, 'Here is what you can get for that price,' and then we bring out a cheap hot-water bottle, for instance, and show how easily the handle may be torn off. Then we ask the customer to pull with full force on the handle of a good water-bottle. The difference is plain, and we generally make a sale of the good article."

### CLOTH HOT-WATER BAGS.

One result of the cheapening of hot-water bottles, on account of the constant pressure of competition, has been the weakening of the bags, says *The India Rubber World*, not only with respect to handles which come off, but also at the seams and generally all over. This is apt to lead, in the opinion of one druggist interviewed, to the general adoption of waterproofed-cloth bags. "I sell a few of these already," he continued, "and I expect to sell more. In fact, the manufacturers will be forced to come to their use. In no other way can a hot-water bottle be made so strong, at the edges and elsewhere, as by the use of a good quality of cloth. Then, with a cheaper quality of rubber, a stronger bag can be made than is possible with the use of the best rubber without the cloth. There is no need of stretching in such articles, and elasticity may be left out of account, which permits of the use of cloth. Formerly I thought that cloth bags would not be soft or yielding enough—and they are apt to be rather stiff before use—but my customers tell me that when filled with hot water the cloth bag becomes as soft as could be desired, and that the water seems to retain its heat longer. By the way, I have had an interesting experience in this line. Some time ago the discovery was made, in the sub-cellar of a certain store, of 4,000 cloth water bottles which had been made fourteen years before by the Hodgman Rubber Company. I retailed these goods at a special sale, and out of the whole lot, I believe that less than a half dozen came back to me with complaints. Those were really first-class goods. In the intervening years there have been some cloth bags made, but few in comparison with the rubber bags. But in three years more, for the reasons I have given, I shall expect to see most of the hot-water bottles made of cloth."

### APPEARANCES DECEPTIVE

In druggists' sundries, as in some other lines of rubber goods, it is not always possible to judge of quality by appearances. A striking example of this is to be found in the red rubber water-bottles which have been in the market for a dozen years or more. When well made they have proved to be a singularly desirable line of goods—soft, durable, and attractive in appearance. They have been rather high-priced, but one can afford to pay well for a hot-water bottle that gives good service for six years. The trouble about these colored rubber bottles, however, according to an uptown dealer, is in the lack of uniformity of results from vulcanizing the goods. "An exceptionally well-cured lot of them," he said, "might be followed by a lot looking equally well, but liable to fall apart after a few weeks' use. Two firms doing a good business in the manufacture of druggists' sundries have been putting these goods on the market, but one of them, on account of the unsatisfactory results attained by everybody in the business, has lately discontinued their output."

### IS THERE MONEY IN RUBBER SUNDRIES.

Does it pay druggists to make a special effort to sell rubber sundries? In answer to this query the manager of a store on the west side of New York replied: "As for our own experience, I can say that since we separated our rubber goods from our general stock, four years ago, and devoted a special floor to them, our average daily sales in that department have increased just twelve-fold. Our whole business has also increased meanwhile, but at no such rate as in our rubber line. One advantage of having rubber sundries in stock separately is that the ladies—who lead by a large majority in the buying of such goods—may make their selections with less publicity than in the general store. Here we have the advantage of more privacy and a good arrangement of goods with a view to their display; a lady assistant is kept on the floor; and we make it a point to carry no goods that we cannot recommend. It should be mentioned also that our store is in the center of an important shopping district. After we have become satisfied with a line of goods for which we have a considerable demand, we order them marked with our name, and many orders come to us through the advertising thus gained by the house. Not long ago an exporting firm in this city received an order from Japan for water-bottles from our house, which we can explain only on the supposition that goods bearing our trade-mark must have been carried by a traveler to that country."

### ENORMOUS GROWTH OF THE TRADE.

The articles in most general demand in druggists' sundries are fountain syringes and hot-water bottles. While it would seem, to a druggist constantly making sales of such goods, that every individual in the land must have been supplied by this time with a fountain syringe and a hot-water bottle, now and then a person wanders into a New York drug store who never before heard of one. One retail druggist reports having sold a weekly average, for three years past, of one gross of one-quart fountain syringes of a single make. This would make a total in a year of 7,488 quart syringes, besides the other sizes and makes sold from the same store. The house referred to sells about fifty fountain syringes to one bulb syringe for the same purposes. In hot-water bottles, one quart and two-quart sizes are most in demand, though they are also made in sizes up to six quarts, and in smaller numbers down to "000," which holds about two ounces. The latter is for the application of hot water to the eye or ear. Lately there has been introduced a crescent-shaped "bottle" for the application of hot water to the throat, which has been well received.

### PRESCRIBED BY PHYSICIANS.

Doubtless the influence of the medical profession has greatly promoted the sale of druggists' sundries. Many articles in this line are sold on physicians' prescriptions, and probably many more are bought upon the recommendation of a physician, without the formality of a prescription. When the advantages from the use of a given rubber article once become known in a household, not only will a future demand exist for it there, but a knowledge of the facts is likely to spread among the friends of the family. In this way the people are rapidly becoming educated in the use of rubber sundries from the drug store. It could not be learned that any New York druggist systematically distributes advertising matter in relation to rubber goods. As everybody knows, they do not use the advertising columns of the newspapers except now and then for some specific remedy.

### RED RUBBER GOODS.

As to the discontinuance of the manufacture of red rubber druggists' sundries, the president of the company above referred to said: "It is not proper to say that we have made up our minds definitely on the subject. Red rubber goods are a 'risky' class, and for that reason more money must be charged for them, but we have always made it a point to replace any goods which proved unsatisfactory. It is only by charging a good price that we have been able to thus guarantee these goods and the price in many cases has interfered with their sale. But if we should receive to-morrow an order of sufficient size for red hot-

water bottles we should manufacture the goods." With regard to cloth bags for water bottles, the same speaker said that his firm had not found lately any change in the relative proportion of orders received for the cloth bags and the pure rubber.

NO EXPORT TRADE.

"Have you made any efforts to build up an export trade in druggists' sundries?" a leading manufacturer was asked. "We have made such efforts," was the answer, "and have met with some success The success has not been large, however, compared with what can be done in our own country. It is chiefly a question of wages. If we pay three times as much for wages as is paid in Europe, naturally we cannot compete as a general thing with the Europeans in foreign countries. We do well to retain the American market for ourselves. This we do only by the employment of active traveling salesmen and the expenditure of money in different ways. Even then all that saves us from greater competition on the part of European manufacturers of druggists' sundries is the fact that we are nearer to the dealers, and that we welcome small orders which a factory on the other side would not care to handle. This convenience in replenishing stocks promptly and in orders of any size to suit the druggist is a great convenience to the trade, and forms a barrier against a larger import business."

## A Word for the Salesmen.

English buyers have a very systematic method of treating with salesmen who call upon them with a view to selling a bill of goods. They set apart a certain portion of the day or the week to the reception of the traveling man, when he can show his samples and make his little speech. To further expedite matters, these buyers, as a rule, ask their visitors if they are carrying any new goods and if so they look over the samples of such, and buy or not, as suits them. Should it happen that the drummer has nothing novel, the buyer refers to a memorandum kept for the purpose to ascertain whether a replenishment of the stock is necessary, and if needed orders it at once without keeping his visitor waiting for a decision, as is so often done in this country. Then, again, our English friends allow out-of-town salesmen to call on them outside of the hours fixed for those who can conveniently abide by the rule. When the buyer is busily engaged he will immediately inform his caller of the fact and appoint a meeting that will cause no inconvenience to himself or loss of money or time to the drummer. Best of all, the buyer is always very punctilious in keeping such engagements, and unless something unforeseen occurs will never disappoint the salesman or keep him waiting. Doubtless there are many buyers in this country who are equally as punctual and methodical, but, from the number of letters sent us by roadmen complaining of ill treatment at the hands of the persons in question we cannot help but feel that there is plenty of room for improvement in this respect.

SUGGESTIONS TO CRANKY BUYERS.

Cranky buyers, as a rule, are men of very little experience outside their own office, and have no road experience whatever. This class of buyers do not consider the time of a salesman worth anything, while it is equally as valuable in proportion as theirs.

Buyers who are courteous, considering a salesman's time worth something, and accord him a hearing, let it be ever so short, will seven times out of ten buy goods cheaper and better than if they allowed the salesman to hang around for hours, and sometimes days, before affording him a hearing or a chance to see him in regard to his goods.

If a salesman has a job or inside deal of any kind he will never offer it to the cranky buyer or to the one who kept him hanging around for hours. The price of goods to such buyers generally advances according to the time the salesman has been waiting for an audience. These are facts, but many buyers don't know it.

It is just as easy for a buyer to tell the salesman at 8.30 Monday morning, after an interview of five minutes, that he does not wish any of his goods, as it is to say the same thing Thursday or Friday of the same week.

By so doing he affords the salesman an opportunity to make two or three other towns, and perhaps sell many bills, thus earning his salary and at the same time making money for the house he represents.

POLITENESS.

Politeness is one of the cheapest commodities in the world, and the buyer who dispenses it with a lavish hand is always sure to make friends among salesmen, who are willing to aid him in every possible way. He will also be serving the best interests of his employer, who, as our correspondent points out, is always benefited by dealing properly with the commercial traveler. The latter is but human and should not be looked upon as an interloper in any sense of the word. "Live and let live" should be the motto of all, as each is dependent on the other. Without making mutual concessions both will be sure to lose golden opportunities that can never be recalled.—*Iron Age.*

## European Advertising.

Europeans don't go in for advertising to anything like the extent that Americans do. But they take the shine right off Americans for original schemes to attract attention to their shop windows. In London, Paris and the larger cities in Belgium the shopkeepers are continually devising catchy advertisements. Shoe dealers, hatters, safe makers and men in various mercantile lines do the business up best, but the confectioners, pastry men and other small merchants are not a long way behind them. A shoe dealer in Brussels, who makes a specialty of a water proof shoe, keeps a pair of the shoes standing in a pan of water in his window all day long. The water comes just up to the top of the soles, and the public are respectfully invited at all times to step up and feel the inside of the shoes and see that they are perfectly dry. Another shoe dealer in London made a specialty of shoes for 'bus drivers, and his greatest claim for them was that they were unusually warm. He kept a pair of shoes embedded in a cake of ice in his shop window, and any one could walk in and feel the inside of them and feel that they were warm. A hatter in Antwerp who manufactures a water proof silk hat keeps one of them in his shop window suspended over a pan, with a stream of water running over it. In Paris a firm of safe makers employed two men to stand in the window of their place all day and hammer on the lock of one of their safes with huge sledge hammers. Every confectioner in Paris who goes in for window advertising at all has a big Eiffel tower of candy in his window; but fine as the Parisian displays are, they are not nearly so handsome as those in Brussels. The amount of cake and candy which is wasted in window decoration in the big Belgian cities is amazing.

## Placing an Advertisement.

The placing of an advertisement in an ordinary New York newspaper is a simple and easy process, but when that paper is printed in German it is a different matter altogether. An advertiser can cross the threshold of an American newspaper at 4 03 with his "copy" in his hand and pass under the wire with a receipt at 4 04⅛. But when he enters a German office and makes known his desire to the man at the desk he is subjected to a close scrutiny, and if it is found impossible to dissuade him from his purpose the advertisement is handed to the regular astronomer and conveyed by the latter to the chamber of science in the upper story. The Reichstag assembles in the great council hall to discuss the best means of keeping the advertisement out of the paper. All this time the would-be advertiser remains on a bench in the outer office. As soon as the astronomer has completed his calculations of the exact number of lines in the advertisement and made other estimates bearing upon the matter in hand, he submits his charts to the Reichstag and goes downstairs to cast the horoscope of the advertiser. Before any further steps can be taken skilled accountants must verify his figures, and when this is done satisfactorily the sages in council assembled prepare a manifesto covering every point of the case and place it in the hands of the Bismarck on the ground floor. Then the latter puts on the black cap, summons the advertiser before him and passes sentence to the effect that the advertisement will cost $2 83 for one insertion, $6.31 for two insertions and $27.63 for a whole week.—*The N. Y. Journal.*

An English exchange refers to the custom of a retailer who hires a column in his local newspaper for the publication of the following announcement, which is printed at the top of the column, the remainder of the column being left blank:

JOHN H. SMITH, PHARMACEUTICAL CHEMIST, BRIDGE STREET, CONTRACTED WITH THE PROPRIETORS FOR THIS COLUMN TO ADVERTISE THE LOW PRICES OF HIS PURE DRUGS, AND, THOUGH HE HAS TO PAY FOR IT, AT THE LAST MOMENT HE HAS DECIDED NOT TO FILL IT, AS BY DOING SO HIS COMPETITORS WOULD GET TO KNOW HIS LOW PRICES.

P. S.—THE PUBLIC ALREADY KNOW THEM.

Probably not 50 people know that the drawing by Mr. Du Maurier which has been the most widely circulated is the only one that does not bear his signature. It is one that millions of people have seen and are still seeing every day without ever suspecting whose the drawing is, and it has been seen by millions of people who never even heard of Mr. Du Maurier's name. The drawing in question is the picture of the bubbling spring which decorates the label of every bottle of Apollinaris water.—*The Bookman.*

## THE NEWS OF THE FORTNIGHT.

**Boxes and Cartage.**

The failure of the scheme to inaugurate a system of charges for box and cartage seems to be assured. One Boston house declined to enter the agreement, and this, together with the vigorous protests from the retail trade, some of which appeared in the columns of the AMERICAN DRUGGIST, was sufficient to defeat the project, at least for the present.

**Legislative.**

The New York College of Pharmacy discussed the proposed change in the poison law for the State, and appointed a committee to draft a new law.

Representative Crisp of Georgia has introduced into Congress the bills for the reorganization of the pharmaceutical service of the United States Army and Navy and also of the Marine hospitals. These bills are now known as H. R. Bills, Nos. 1,662, 1,663 and 1,664. They have been introduced in the Senate by Senator Bacon. The bills affecting the Army and the Navy have already been printed in these columns. (See the issue for October 10, 1895, page 232, and for November 25, 1895, page 315.) We have received the assurance of the Hon. A. J. Cummings, former chairman of the House Committee on Naval Affairs that he will give the bills his active support.

**Associations.**

The Apothecaries' Guild of Boston and vicinity has kept alive the interest of its members in the organization, and in the outlying towns schedules of prices have been adopted which yield a little profit on proprietaries, and which moreover have the advantage that they bring about absolute uniformity of price on these goods. Mr. Jaynes, the big cutter of Boston, announces in a newspaper "interview" that the action of the Guild has been highly beneficial to his business, but within a few days of the publication his attorney writes a warning letter to the Guild stating that "any annoyance and injury that your Guild has already caused in its persistent endeavors to injure Mr. Jaynes in his business he has borne patiently." Which of the two is correct, Mr. Jaynes or Mr. Jaynes' lawyer? Mr. Flynn, president of the Guild, takes pains to point out that the object of the Guild is to benefit Mr. Jaynes in common with all pharmacists.

**Boards.**

The Illinois Board of Pharmacy keeps ever to the front. Now 35 true bills have been found (page 32) by the Grand Jury against pharmacists of Chicago. Siegel, Cooper & Co., the large department store merchants, are defendants in two cases.

**Deaths.**

Dr. J. C. Krieger, one of the best known and most highly esteemed of the pharmacists of Cincinnati, is dead, and our Cincinnati correspondent gives an extended obituary notice of Dr. Krieger in his letter.

### Box and Cartage Dead.

The credit, if so it can be denominated, of nullifying the efforts of the Box and Cartage Committee of the National Wholesale Druggists' Association, of which Frank Faxon of Kansas City, Mo., is the chairman, toward extending box and cartage charges east of Pittsburgh, can be laid, it is said, at the door of Weeks & Potter of Boston.

It will be remembered that when Mr. Faxon and his committee left this city for the West a few weeks ago quite a hopeful feeling was manifested concerning some united action on the charges, and the general feeling was that the trade here would agree on a charge of perhaps 50 per cent. of the actual cost of the package.

To settle the question definitely there was a meeting early in the present month of the Jobbing Drug Committee of the Board of Trade and Transportation at its rooms. Before much discussion had taken place, a communication from Secretary Fred. Carter of the New England Drug Exchange was read. Mr. Carter wrote to the effect that on account of a disagreement among some of the members the Exchange had found itself unable to put the plan of charging box and cartage in force. The firm which had utterly refused to make the charge was, it was said, that of Weeks & Potter. As might have been imagined, the news was something of a shock to those members of the committee which had hoped to carry through the plan.

Addresses were made by several of the members, who held that the failure of the plan in the Eastern States made it practically impossible to put it in force here. A New York State druggist could not be discriminated against in favor of a New Englander, and if customers were not treated alike there was likely to be trouble, leaving aside all question as to the fairness of such methods. Nothing was said against the adoption of the plan itself, but the expediency of it at the present time was the main argument.

It was finally decided to lay the matter on the table, but competent members of the committee held that this disposition of it practically settles the question finally as far as the East is concerned.

"And I don't know that it's a matter to be regretted," said a big wholesaler the other day. "The honorable houses would have suffered, for the others would have evaded their obligations and failed to charge. It would only have provided a new method of fighting your competitors dishonestly, and there are houses in the trade that would have descended to it."

## NEW YORK.

W. O. Allison, proprietor of the *Druggists' Circular*, has been elected an associate of the American Chemical Society.

The Morningside Pharmacy has been opened at 113th street and Eighth avenue. Joseph P. Carroll is manager of the store.

W. C. Depew of J. L. Lyons & Co., New Orleans, has been in New York buying goods.

J. Fred Doty, manager of the Mattson Rubber Company, expects to make a business trip to the West this month.

Paul Engemann, formerly with Lehn & Fink, is now with McKenzie Brothers & Hill, the well-known essential oil dealers, in the capacity of salesman.

F. W. Towne & Co. have a very attractive window display of "Frog in your Throat?" in their store at Weirfied street and Bushwick avenue, Brooklyn.

The New York Store Fixture Company will soon put a new set of fixtures in J. H. Legett's pharmacy, at Plainfield, N. J.

James E. Davis of Williams, Davis, Brooks & Co., Detroit, spent a portion of the holidays at the Imperial Hotel, New York, with his son and daughter.

A. W. Weeks, representing Fox, Fultz & Co., leaves the city January 12 to visit the trade in New Jersey, where he expects to do a land office business.

W. A. Morrison of the firm of Morrison & Hefley, Waco, Texas, has been spending a short time in Philadelphia and New York recently buying goods.

By a fire that occurred on December 28, J. J. V. O'Connor & Co., druggists, of 585 Ninth avenue, had his premises and stock damaged about $6,000 worth.

The annual meeting of the Drug Trade Section of the Board of Trade and Transportation, for the election of officers, takes place on the 16th inst.

Recent visitors to the city were George Lamping, Waterbury, Conn.; W. H. Quinn, Ballston, N. Y., and Euclide J. Brunette, Saratoga.

Charles Loeber of Bedford Park, N. Y., is making extensive alterations in his store, and is having the New York Store Fixture Company put in attractive quartered oak fixtures.

E. E. Riggs will soon put new fixtures into his store, at Trenton, N. J., which will be supplied by the New York Store Fixture Company, who have fitted out several pharmacies in that city recently.

The big illuminated thermometer in front of Hudnut's downtown pharamcy, at 205 Broadway, was blown down and smashed in the wind storm that shook the city on the December 26.

One of the cleverest of all the new year greetings sent out by the drug trade was that of Merck & Co. Verbatim it read as follows: "January, '96. Here are both our hands for 1896! Merck & Co. To our friends."

Visitors to the trade have been few during the holidays, during which the most exciting topic has been stock taking. This species of amusement is not yet concluded in many establishments, many being still hard at work upon it.

Dr. Hoffmann, formerly editor of the *Pharmaceutische Rundschau*, sailed for Europe by the North German Lloyd's line on the 4th inst. He goes for rest and recreation, and will be absent about eight months.

The premises of Geo. Wasson, the well known drug broker, at 116 John street, were accidentally set on fire a few days ago, necessitating the calling out of the fire department. The fire was subdued before much damage was done.

W. D. Corcoran's pharmacy at 1270 Tremont avenue, has been appointed a Post Office sub station. The selection of Mr. Corcoran's store as a sub station is a wise one, as it is conveniently located and is well known in the vicinity.

Almost all of Lehn & Fink's travelers have returned to the road. Messrs. Blitz, Soltau and Fick have started for the West; Mr. Hinkston is touring New York State; Mr. Martin is back in Pennsylvania, and Mr. Lampa has been welcomed to his territory, the New England States.

Miss Sadie Sullivan, who was at one time cashier at Hegeman's, has been engaged to handle the checks and cash at Hudnut's downtown establishment. Besides being unusually attractive and genial, Miss Sullivan is said to be one of the smartest and quickest cashiers in the city.

E. A. Aronstamm, 105th street and Third avenue, is having marble counters, a new prescription counter and new show cases placed in the store by the New York Store Fixture Company. A good business is carried on at this pharmacy, and it is one of the most popular drug stores in upper New York.

A. L. Hatch, representing Fox, Fultz & Co., was busily engaged New Year's week filling his trunk with a new line of fresh samples preparatory to starting on trip No. 1, 1896, which Mr. Hatch expects to be a record beater. He will visit the trade in Pennsylvania, Maryland, West Virginia and Ohio.

On December 31, John P. Sutherland, for 20 years a member of the firm of Ward, Sutherland & Co., 128 and 130 William street, and one of the oldest drug merchants in this city, died at his Brooklyn home, 438 Classon avenue. He was 74 years old and leaves a widow and five children.

The Chas. N. Crittenton Company announce that they have been appointed agents for the Vinolia preparations manufactured by Blondeau & Co., London. No changes have been made in prices.

E. F. Stout, who has represented Ladd & Coffin in New York State for the past seven years, will hereafter look after the interests of Williams, Davis, Brooks & Co. in this section. The success which the Dabrook perfumes have already met with in New York will, no doubt, be much augmented by the enlistment of Mr. Stout.

John Guerdon, for many years in the drug business in St. Louis, is now in the East as special representative for malt nutrine, the Anheuser-Busch new specialty. Mr. Guerdon is active in Boston at present, but took time to make a trip to New York during the holidays. He saw the town in the company of Hugo Soltau, Lehn & Fink's well known representatives, and "there were others."

Robert J. Seabury of Henry K. Wampole & Co. of Philadelphia, has opened an office in this city where he will devote his time and attention entirely to pushing the export trade of all of the house's sterling preparations. Mr. Seabury's geniality is pleasantly inclosed in room 111 of the Morris Building, corner of Broad and Beaver streets, and there he is evolving new ideas daily to push the Wampole goods in every part of both the civilized and uncivilized world.

There are very few New York creditors of Singer & Wilson, the wholesale druggists of Peoria, Ill., who were closed up by the sheriff on the 2d inst., and whose liabilities are placed at $200,000. Lehn & Fink are among the mourners, and yet, as they figure their loss at but $1.72, they think they will manage to recoup in some way. The principal creditors are in the West, and include banks and dealers in druggists' sundries, liquors and cigars.

Kenton Coates, a druggist, at 313 West 118th street, this city, was held for the grand jury in the Lee Avenue Court, Brooklyn, for striking Policeman Schilling of the Bedford avenue station, in the face, on the sidewalk, in front of the Hotel Wellington at Broadway and Dunham place. Schilling's nose was broken and his left eye discolored. When arraigned in court Mr. Coates expressed sorrow for his exploit, and Schilling also said he didn't believe that the druggist meant to hurt him.

Alderman E. Alexander Houston of Yonkers, who is the leading pharmacist in that town, planned a pleasant surprise for the Mayor and his fellow aldermen at the meeting of the Council on the day before New Year's. The Alderman makes a fine brand of cologne. When the members took their seats, each found upon his desk a good sized bottle of the Alderman's cologne. The bottles were neatly wrapped and held by light blue ribbons. On the outside of each was a card bearing the Alderman's name and the words "A Happy New Year—Compliments of E. Alexander Houston."

The action of the American Pharmaceutical Association in endeavoring to better the condition of the military, naval and hospital pharmacists, is being appreciated by those gentlemen. Wm. H. Meyers, Ph.G., apothecary of the U. S. Navy, on board the "Vermont," recently wrote for information on the subject to G. J. Seabury. In his answer Mr. Seabury wrote: "I am an uncompromising advocate of giving all three classes named the rank of an officer, with his pay, which will be that at least of a first lieutenant. If you fail to receive this recognition from Congress it will be no fault of yours truly."

The sympathy of the trade has gone out to Mr. Rogers of Rogers & Pyatt, on the sudden death of his father, Andrew B. Rogers, on December 29. Mr. Rogers' death was most unusual. He lived with his family at 25 Abingdon square, and attended services at the Bedford street Baptist Church, of which he was a member nearly all his life, besides being one of the leaders of the Bible Class. With the congregation he had started singing, "Nearer, My God, to Thee," when suddenly, without any warning, he fell to the floor. Those about him thought that he had merely fainted, but he died of heart failure before medical aid could be summoned. Mr. Rogers was 70 years old, and leaves a widow and two sons. He was employed in the Union Dime Savings Bank, was a Volunteer Fireman, and an active Republican, though he had never held public office.

### A POPULAR DRUMMER.

J. F. Haynes, the rolly-poly lump of good nature and sunshine, who bowls about the country in the interests of Lehn & Fink, drug importers of New York, was in town to day on his tri-weekly visitation. It is said among the trade that Mr. Haynes sells more goods in Poughkeepsie than all the other drug drummers put together. This from the Poughkeepsie *Evening Enterprise*.

### COLLEGE NOTES.

At the special meeting of the New York College of Pharmacy, on December 30, with Thomas F. Main in the chair, a motion was unanimously carried that the president appoint a committee, consisting of the four professors and three members of the college (all to be retail druggists at present in business) to draft a new poison law, and submit it at the next stated meeting of the college, in January.

Probably the most complicated class yell of any college in the country is that adopted by the class of '96, New York College of Pharmacy, which runs like this: "Para mido anisol—phenolphthalein terpinol—benzol—cresol delphinine—argon aurum atropine—funcas—ficus—lea—mastiches—N. Y. C. P. '96."

The following committees have been appointed by M. J. Coats, president of the senior class; Glee Club, Orrin F. Ives, A. Deutschberger, Joseph C. Becker, Adolf Imhof, John G. Miller; Flag Committee, Miss Eleanor Aschenbach, Miss Julia Lawall and Miss Madge O'Connor. The flag adopted by the senior class is of blue and gold and bears the figures '96 upon it.

The first annual reception and ball of the Alumni Society will be given in the Banquet Hall of Madison Square Garden, on Wednesday evening, January 22. The Committee of Arrangements consists of Messrs. Julius Taunelbaum, chairman; William A. Ebbitt, Adolph Henning, George C. Diekeman, M.D; Arthur C. Searles, Ewen McIntyre, John Oehler, William A. Hoburg, Jr.; Rudolph Gies and Thomas M. Davis.

### Fulton Club Reception.

The fifth New Year's reception of the Fulton Club took place Saturday, December 28. The New Year's reception was given thus early, first, because it was Saturday afternoon, and, second, because many of the members belong to uptown clubs, and were pretty busy on December 31 and January 1. The programme of entertainment included comic singing, humorous stories, banjo playing, piano recitations and champagne. The *menu* started off with consomme in cups and wound up with punch, sandwiching about everything edible to be had in town.

Among those present were: Joseph C. Baldwin, Thomas Barrett, George P. Benjamin, Eugene G. Blackford, R. E. Bonner, S. W. Bowne, William Brookfield, Edward B. Brown, H. P. Carrington, Harry Holbrook, Jr.; Mark Hoyt, E. W. Ketcham, George W. Ketcham, John McKesson, Jr.; Herman C. Mechling, Frank L. Montague, Jordan L. Mott, David D. Otis, Henry B. Platt, Runyon Pyatt, Theodore Ricksecker, Milton Robbins, George C. Smith, Orison B. Smith, Ormond G. Smith, William F. Smith John H. Sprague, William C. Trageser, Frederick W. Tuttle, Clifton W. Wharton, Jr.; Charles S. Whitney, W. Hull Wickham, Albert Winter and Charles L. Gilpin.

### Smuggling at Niagara Falls.

NIAGARA FALLS, N. Y., January 4.—It has just been discovered that adulterated phenacetine in the form of acetanilid has been brought into this country through this port in large quantities.

A recent large consignment was examined and passed at New York by the Government chemist, where it was certified to as genuine phenacetine, but a later examination showed clearly that it was acetanilid. The shippers sent the stuff to Rochester, but realizing they were watched they have not dared to call for it.

## CONNECTICUT.

LECTURE BY PROFESSOR MADISON.

NEW HAVEN, January 6.—A public lecture on chemistry was delivered at the Y. M. C. A., Bridgeport, recently, by Wm. H. Madison, Ph.G., the well known druggist of the same city. He took for his subject "The Chemistry of Some Common Things." After briefly outlining the methods of ascertaining the composition of matter at the disposal of the chemist, the lecturer showed how elements were detected in the photosphere of the sun by the means of the spectroscope. This was followed by an account of the synthetic production of some of the more important commercial substances, for example, alcohol, oil of wintergreen and so forth. By means of apparatus contrived by Mr. Madison acetylene produced by the decomposition of calcium carbide was burned, the electric lights with which the room was illuminated paling into insignificance beside the new light. The remainder of the lecture was devoted to a consideration of some of the operations in every day life, such as dyeing, bleaching, brewing, tanning and so forth. The lecture was elucidated throughout by experiments of the most interesting kind. Professor Madison was well received, and held the attention of his audience from beginning to end, and upon its completion he received numerous requests for another on kindred topics.

THE GRAY LIQUOR CASE.

Druggist Mason P. Gray of Mystic was recently tried for violations of the liquor law on four different counts. It was the intention of the judge to give Gray a jail sentence, but his attorney pleaded so hard in behalf of his family that he was fined $200 and costs amounting to $102.80 instead. But this fine was only imposed after Gray promised to get out of the business and stay out. The judge cautioned Gray that the other counts were not to be nolled or erased from the docket, as if the accused was ever brought before him again on a similar charge he would be tried on the old counts as well.

GRAY'S FATHER GETS LEAVE TO OPEN.

Shortly after this case was disposed of, Dr. Gray, father of the convicted druggist, had his counsel ask the court what his rights were in the place formerly occupied by his son. The father complained that he was deprived of his right to use the store as an office and drug store in his practice of medicine. Counsel wanted to know if it was so that a legitimate business had to be abandoned. Judge Noyes said he could conceive no objection to the father entering the drug business, and accordingly the doctor has reopened the store for business.

REFUSED A LIQUOR LICENSE.

The Stafford Drug Company, recently organized at Stafford Springs, has been refused a liquor license. This is the company Dr. La Bonte and Howard North of Ansonia are interested in. Pending their application before the commissioners, 20 or so of the leading citizens of the town petitioned the officials not to grant this application. The petitioners said that the company was formed as a drug company to introduce a liquor business in a no licensed place. Dr. La Bonte and Howard North of the company appeared before the commissioners and stated that the firm intended to conduct a legitimate drug business, and wanted the license as a necessary adjunct. Lawyer Reed opposed the granting of the license on legal grounds. He said that according to the statutes of Connecticut a physician is criminally liable who writes a prescription for liquor to be purchased in a store in which he was a partner. The commissioners finally decided against the company. The firm intend locating in Stafford Springs notwithstanding the decision, and later on will make a determined effort to secure the license.

CHAMPION SKATERS.

Walter Torrance of the Hogan Drug Company of Derby is one of the speediest skaters in that city. He has a rival in the person of Manager John Murphy of the Holian Inn, and so during the recent skating period a race was arranged between the two star performers. One of the articles of agreement was that each competitor should wear 29 cent skates. They started, they fell and they finished. But Druggist Torrance reached the coveted goal first and he was declared the winner. It was a great race.

### News Notes.

The directors of the Apothecaries' Hall Company of Waterbury held a meeting recently and elected F. B. Rice president of the company, to fill the vacancy caused by the death of L. I. Munson.

John K. Cook, formerly with Nichols & Harris, New London, is now connected with Moon's Pharmacy, in the same city.

W. Marx, connected with Pixley's Drug Store, at Wallingford, has returned after a pleasant stay in the South. He visited the Atlanta Exposition while there.

Hall & Loomis are about to open a drug store on Grand avenue, New Haven. Mr. Loomis was formerly located on State street, in the same city.

William McEnerney, brother of Druggist McEnerney of Ansonia, has entered the employ of the General Electric Company, at Schenectady, N. Y., as an electrical engineer. He is a recent graduate of Yale.

George Smith of the People's Drug Store, at Seymour, presented to each one of the local physicians a useful pocket knife as a Christmas remembrance. The medical men returned their thanks to the generous druggist.

One of the most handsome and commodious pharmacies in Waterbury was recently opened by Charles A. Briggs, at the corner of West Main and North Willow streets. Mr. Briggs formerly was located in Brooklyn, a suburb of the Brass City.

William Sayles has purchased the stock, fixtures and good will of the estate of B. M. Beebe, druggist, 222 Bank street, New London, from Charles B. Whittlesey, trustee. Mr. Sayles has for the past seven years been with C. C. Lippitt and will refit and restock the store.

Miss Bessie Augusta Abbott of Bethel and Herbert Kinner of the City Hall Pharmacy, Danbury, were married at the home of the bride's parents, at Bethel recently. The best man was Edward M. Keeler, another druggist of Danbury, and Miss Mamie Crofut of Bethel was bridesmaid.

L. F. Hawley, formerly with the Park Drug Company, Hartford, has branched out for himself and opened one of the handsomest places in the Capitol City, at the corner of High and Main streets. His establishment is adorned by one of the latest style fountains manufactured by the Low Art Tile Company of Boston.

Richard B. Healey, the druggist, at 119 Chapel street, New Haven, and Miss May, daughter of Patrolman Ahern, were married in St. Mary's Church on New Year's morning. Thomas B. Healey, a brother of the groom, also a druggist, was the best man. A reception followed the ceremony, at their newly furnished house, at 115 Chapel street.

Druggist Wingood of Ansonia has filled the place left vacant by the retirement of Mr. Osborne. The new clerk is Mr. McCarthy, a licensed pharmacist. Immediately after former Clerk Osborne left the store Druggist Wingood was nearly overwhelmed by applications for the vacancy by young men who desired to learn the business. Mr. Wingood said he was greatly surprised at the number.

A funny sight was witnessed at Springfield recently. A drug clerk rushing along the street had the misfortune to drop the gallon jug which he was carrying, and there was hardly a dry eye in the crowd who were near when the mishap occurred. This apparent sympathy was not for the clerk or for the loss of the contents of the jug, for it was not anything drinkable, but concentrated ammonia that was spilled.

## MASSACHUSETTS.

BOSTON, January 5.—An important meeting of the Apothecaries' Guild of Boston and vicinity was held at Young's Hotel on the 3d inst. The attendance was the largest of any meeting up to that time and there was an abundance of enthusiasm. President Flynn was in the chair as usual, and after a brief opening called upon Assistant Secretary Flynn to read the records of the last meeting. These were subsequently approved, as was the report of Treasurer Godding, which showed a balance of $181.78.

### PRICE SCHEDULE INDORSED.

President Flynn said that the Guild had arrived at a point where 500 druggists of Boston and its suburbs had expressed a desire for a schedule, which was to do away with cutting. He deplored the fact that a few were standing in the way of a fair profit, but said that this would cause no wavering in the Guild's policy, and that the effort would yet be pushed to a successful issue. L. H. Smith then submitted the report of the Committee on Schedule of Prices. This schedule was printed in the last issue. The schedule was indorsed by the members.

### ALL BUT EIGHT SIGN.

Agent Reeves said that 450 signers had been secured to the proposed schedule. The druggists visited included those in Boston and vicinity and extended from Brockton to Lynn. The number of druggists who refused to sign made the very small minority of eight. Some of these say that they will sign when Jaynes' signature is secured. Mr. Reeves thought the department stores could be depended upon to sign, in accordance with their promise of some months ago. The speaker thought that the outstanding manufacturers would soon desire to identify themselves with the movement. They would eventually find it to their benefit to do so. Mr. Reeves urged his hearers to take up the fight; the officers had done their work well and brought it to a point where it should receive the support of every retailer.

At the last meeting of the Guild some action was taken looking to securing permanent headquarters, and George W. Cobb, for the committee having charge of that matter, reported progress and the committee was given further time.

President Flynn then referred to the recent advertisement of C. P. Jaynes in the daily papers. Some of the members called for the reading of the "ad." and secretary G. W. Flynn complied by reading "Jaynes' interview with himself."

The following letter was then read :

### A LAWYER'S LETTER.

BOSTON, January 2, 1896.

MY DEAR SIR :

A circular sent to the members of your Guild over your signature contains statements that threaten an injury to the business of my client, Chas. P. Jaynes, by attacking articles which he sells and in which he is interested. As the Guild is apparently to discuss the merits and demerits of such articles to-morrow afternoon, I write to give you notice that any action taken by your Guild, or any notice sent by you as president, or by any of the officers or directors of your company, that shall tend in any way by implication or otherwise to injure Mr. Jaynes or his business will be followed by summary proceedings on his part to protect himself.

The annoyance and injury that your Guild has already caused in its persistent endeavors to injure Mr. Jaynes in his business, he has borne patiently ; but now, however much he may regret it, he must have such attempts to interfere with his personal rights stopped, and such interference ended.

Yours very respectfully,
CHAS. T. GALLAGHER,
Attorney for C. P. Jaynes.

C. P. FLYNN, ESQ.,
President of the Apothecaries' Guild,
Andrew Square, South Boston.

President Flynn then read his reply.

### PRESIDENT FLYNN'S REPLY.

BOSTON, January 3, 1896.

CHAS. T. GALLAGHER, ESQ.

MY DEAR SIR :

A circular was sent to the members of the Apothecaries' Guild over my signature, as you inform me, and I have no reason for denying the fact.

It does not contain statements that threaten any injury to the business of Charles P. Jaynes, and it attacks no interest which he has in any articles ; but your letter does inform me that Lung Kuro and the Hub Lung Protectors are articles in which Mr. Jaynes is interested. This is news to me, and I am glad to be informed of it on the authority of his counsel. I assure you that I will inform the members of the Guild as fully as you inform me.

I cannot help noting that in the first paragraph of your letter you accuse the Guild or me, I am not sure which, of an intention to attack your client's goods, but I will do you the justice of admitting that you correct your mistake in the second sentence of your letter, and acknowledge that we only intend to discuss the merits, if there be any merits, and the demerits, if there be any, of the goods which your client, or you, or anybody else may undertake to advertise as a panacea. If it should injure your client to have the community know that Lung Kuro is not what it is advertised to be, I can't help it, and I am sure the Guild can't help it. We intend to conduct our meetings according to our by-laws, and in the interest of our profession, and we sincereiy trust that whatever we do will be done to elevate our calling, and to assist the commonwealth in the protection of its citizens against quacks and quackery.

I do not know, and I do not believe the Guild which I have the honor to represent as president, has caused any injury to Mr. Jaynes in his business ; on the contrary, the purpose of the Guild is to assist Mr. Jaynes and everybody else in our profession. We have made no attempts to interfere with his personal rights, and we intend to make none. On the other hand, Mr. Jaynes and yourself must both be aware of the fact that we have no intention of allowing any one to interfere with us in the exercise of our rights as citizens, or as druggists, or as members of an association formed for purposes legal, proper and manifestly beneficial to the community in which we live.

Very respectfully yours,
C. P. FLYNN,
President Apothecaries' Guild.

### DRUGGISTS MAY DECLINE TO SELL ANYTHING THEY CHOOSE.

A general discussion then ensued as to the rights of druggists in refusing to sell preparations which from any cause they do not care to handle. It was conceded that it was proper for a druggist to so refuse, and at the end of the discussion it was apparent that at least two articles now on the market could not be conveniently handled by those present.

President Canning of the League then spoke of his stand some months ago, concerning a certain three-cornered production, and was glad to see the members in accord with the views he then expressed. Mr. Cobb thought there were other preparations which it would be well to relegate to the rear. He said that certain manufacturers had insulted the representatives of the Union and thought the members should know of the fact.

### WORK OF THE DORCHESTER SOCIETY.

Mr. Green, president of the newly formed Dorchester Society, sketched the work of that association, referring in detail to its schedule. He was a pleasing and enthusiastic speaker and his ideas met with warm support.

Reference was then made to co-operative manufacturing, but it was thought best not to consider it at this time.

Treasurer Cobb of the N. E. R. D. U. then spoke of the finances of that body. The funds had recently been swelled by these contributions : $200 from the Apothecaries' Guild ; $100 from Cutler Bros., and $100 from Weeks & Potter. Between $400 and $500 was now in the treasury.

Mr. Emerson of Haverhill was the next speaker. He was glad that the friends and enemies of the retailer were known. He spoke of the great responsibilities resting upon druggists, which were more onerous than that of any other calling. These responsibilities entitled the druggist to the support of the community and obtaining of a fair profit. He advocated the adoption of a schedule, as customers were more easily satisfied than when trading under cut rates. At the close of Mr. Emerson's address he received the hearty applause which he deserved.

### GOOD PRICES BEING OBTAINED IN LOWELL.

F. H. Butler, Ph.G., said that the Guild had done good work for Lowell druggists and that satisfactory prices were now being obtained.

E. C. Marshall, Ph.G., urged a resumption of the schedule of prices, and cited an illustration of how goods could be sold for more than cut prices. He expressed his willingness to adopt a schedule and thought the increased interest showed that others were ready to do likewise. He pledged $25 if needed for legal expenses. Mr. Cobb said that as the next meeting was the annual, he would move that a committee of three be appointed to bring in a list of officers. This was adopted and the chair appointed Messrs. Canning, Durkee and Orne on this committee.

### ACTING UNDER LEGAL ADVICE.

The discussion then turned upon the matter of legal advice, and it was learned that every step which the Guild had taken was approved by the Guild's counsel and in his opinion wholly within the law. Mr. Canning thought the opposition would push the matter from a legal standpoint and in that event he was ready to assist from a monetary standpoint.

Mr. Durkee gave the movement his hearty indorsement and pledged his support. He thought it ought not to be forgotten that this movement owed its inception to the M. S. P. A., and he trusted that future meetings of that association would show from the standpoint of attendance that the work was appreciated.

### A CURIOSITY IN THE WAY OF AN ADVERTISEMENT.

One of the curiosities which druggists of the present day will add to their collections for future reference came to light since my last letter. It was an "ad.," not a little one, but a whole column, on the first page of the daily papers, and its cost must have spoiled the profits of its sponsor for many a day. This "ad.", was in the shape of an alleged interview between a reporter who figured in the types as "Rep." and the proprietor of a certain drug store, who is not a member of the Guild. The theme was the alleged villainy on the part of the above organization in attempting to interfere with the conduct of this proprietor's business, but, alas ! according to the story, the plot had failed, his business was flourishing, he was serving the public at cut rates and recommending his own remedies as of yore. It took a long time to tell the story, and history does not state whether or not the results were satisfactory. If it was intended to disturb the equanimity of retailers it failed to accomplish its purpose.

### Massachusetts Notes.

Canning & Patch have dissolved partnership. Mr. Canning will continue at 109 Green street.

The Low Art Tile Company have recently shipped a fountain to the new Stafford Drug Company, Stafford Springs, Conn.

C. S. Bulfinch and Waldon & Vaughn, both of Lynn, have recently purchased hot soda fountains from the Low Art Tile Company.

Horace B. Childs has opened a new store on Dorchester avenue and has fitted it with a new Low Art Tile Fountain.

A recent visit to the factory of James W. Tufts disclosed a full force busily employed. Mr. Tufts reports that there have been few Januarys when the outlook was more promising for a satisfactory trade. A new retail drug business has been incorporated at Worcester, under the name of the Whittier Drug Company. The capital stock is $3,500 and the officers are George M. Woodward, president; John J. Whittier, treasurer; George T. Woodward, John J. Whittier and George M. Woodward, directors.

### Preliminary Examination of Pharmacy Students in Quebec.

The preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec held their quarterly examinations in Montreal and Quebec on Thursday, January 2, 1896, 17 candidates presenting themselves in Montreal and four in Quebec. Of these the following passed upon all subjects, namely: Henri Massecotte, John J. Weinfeld, J. A. Choquette and Sterling Whiteside. Two of the candidates failed on history, namely: J. Bte. Bisaillon and Louis Mayer, and will be required to present themselves again for that subject only.

The case of one of the candidates has been referred to the Council for consideration.

The examiners were Prof. A. Leblond de Brumath and Prof. Isaac Gammell.

The next examination will be held on April 2. Candidates must file their applications to the secretary, Mr. E. Muir, at least ten days prior to that date.

### The Maine Commission of Pharmacy.

At the last meeting of the Maine Commission of Pharmacy, held in Portland, the following applicants for registration were successful: Harry F. Smith, John U. Otis, W. J. Aulbach and R. A. Somers, Portland, and Howard P. Cheney, Deering.

The following applicants were granted certificates as "qualified assistants:" Archie L. Tufts, Westbrook; E. H. Whitney. Sabattus; D. K. Allen, Fairfield; B. Frank Dudley, Milltown.

If a sufficient number of applications are filled from the eastern portion of the State the commission will hold its next meeting in Bangor; otherwise it will be held in Portland as usual. In view of this fact all those from the eastern part of the State who contemplate coming up for examination should notify the secretary, Frank R. Partridge, Augusta, of this intention as soon as possible.

## PENNSYLVANIA.

PHILADELPHIA, January 5. — The street railway strike in this city during the week before Christmas had a bad effect on all business, especially upon the retail druggist who had stocked his store with various toilet articles such as usually find a ready market during the holidays. The drug stores in the center of the city suffered the most and many of them were big losers by the inability of the shoppers to get to the business section.

The old saying, "It's an ill wind," etc., is apropos in this case, as the stores in the outlying sections were better patronized than they usually are, and while the strike lasted they did a far better business than they otherwise would. Many druggists had to lay in larger supplies, and one well known Ph.G. did three times the business he generally does.

The drug stores were more tastefully arranged than ever before, and the druggists, instead of trying to make enough from one sale to last them a year, entered into competition with other stores and in this way did a better business.

#### CLEVER ADVERTISING.

Hance Bros. & White are about the best advertised firm in this section of the country. For several years past their specialty, "Frog in your Throat?" has been given the widest publicity, and wherever it has been thought advisable the cough tablets were widely advertised. Early last year the firm distributed a number of frogs with each package of "Frog in your Throat?" and for the best arranged display of these frogs a prize was offered. This caused considerable rivalry and also occasioned a big increase in the sales of these goods. This year the firm has something new, which is nothing more nor less than a Christmas tree. This tree is placed in the window of the drug store and it is trimmed with such articles as the firm supplies. Some of the trees are decorated with considerable taste by the druggist and they give a bright and cheery look to the store. Even some of the wholesale houses have the tree on exhibition.

#### THE BUSINESS OUTLOOK.

Eighteen hundred and ninety-five was by no means a banner year, although the majority of the wholesale drug houses in this city state that their business was better than it was in 1894. The year just passed was an unusual one in regard to setbacks. It seemed that just as the business showed a good undertone, a setback occurred which caused considerable uneasiness. The beginning of 1896 was somewhat clouded, as there was a hesitancy among the retailers about giving orders, and for the first week the trade was very dull. This state of affairs did not seem to worry the large houses, as it gave them an opportunity to take account of stock. While the trade has at times been depressed there has been very little financial trouble. Of course some dealers were forced to the wall, but as the number was very small it had little effect. Many firms, however, complain of collections, which they state are very bad. It is thought that as soon as the January interests are paid money will be easier and business will be better.

#### SHOEMAKER & BUSCH SUCCEED GEORGE WETHERILL & CO.

George D. Wetherill & Co., one of the oldest drug houses in this city, have sold out the drug business to Shoemaker & Busch. The house of Wetherill was established in 1807 and for many years it was among the leaders of this city. Of late the firm have been paying more attention to other lines, and it was deemed advisable to part with the drug business. As soon as this became known Shoemaker & Busch entered into negotiations with the house and the outcome was that the entire drug stock and good will was purchased by them. The firm of George D. Wetherill & Co. are to continue at the old place, 56 North Front street, where the business of manufacturing white lead, whiting, paints, colors, putty and varnish, and importing and dealing in window glass, brushes and all painters' supplies is to receive more attention than ever.

The giving up of the drug business by this house created some surprise, but it only goes to show that the drug business of this city is being confined to a very small number of houses. This firm had capital, but the members were of the opinion that it would be advisable to drop the drug portion and push their paint business. The firm of Shoemaker & Busch who purchased the drug stock are one of the most enterprising and pushing houses in this city. This firm are well thought of, and they do an immense business throughout the South. They are very agressive, and during the last few years have built up a largely increased business.

#### THE AFFAIRS OF THE LAPP DRUG COMPANY.

A number of months ago the Lapp Drug Company made an assignment. At that time it was stated that the assets were more than enough to meet all liabilities and that speedy settlement would soon ensue. The assignee's sale was held some time ago, and while the assignee has a year to make all settlements there are some creditors who think that the defunct company will not be able to pay anywhere near the amount that was first stated. It is believed that when the settlement is made the creditors will not get much more than 50 cents on the dollar.

#### THE BOX AND CARTAGE CHARGE.

Contrary to expectations the box and cartage agreement did not go into effect on January 1, and from present symptoms it is thought that the charges as contemplated will not be made. A few weeks ago a committee of Western drug houses visited the principal cities of the East to get the leading houses to enter into an agreement to make a charge for boxing goods and for the carting of them to the depot. A number of the houses in this city were averse to entering into an agreement of this kind and were only prevailed upon to sign the agreement if all the drug houses of the East would do likewise. It was thought that it would be impossible to get the New York houses to agree, but contrary to all expectations they signed the agreement. Boston did likewise and each city appointed a committee to act in the matter. In this city it was agreed to make the charges nominal—that is, to charge the buyer only for the cost of boxing and for the hauling. The latter item met with considerable resistance, as many of the wholesale

druggists were averse to making any charge for delivering the goods at terminal points. As the wholesale druggists here had agreed to make these charges there was nothing to do but to put them into effect, and a circular was prepared which was to have been sent to all the retailers announcing the charges.

Before the circular was sent out word was received to hold them back. This caused some surprise until it was learned that a house in Boston had refused to sign the agreement. It is not known what will be done in the matter at this writing, but unless the house which refuses to become a party to the agreement changes its mind, there is not much likelihood of the charges being made. A committee is at work with this house, but it is thought it will not be successful.

MR. MARIS BACK FROM EUROPE.

Henry J. Maris, of the firm of John M. Maris & Co., has returned from a six weeks' trip through England, Germany, Bohemia and France. Mr. Maris' trip was purely a business one, and he feels elated with the success that attended him wherever he went. In Germany he found business very good and some of the manufacturers were loth to take new orders. In Bohemia he made a contract for a large number of decorated bottles. These bottles are very fine and will be an attraction in themselves. Besides this he has secured a large amount of druggist sundries, glassware and porcelain. These goods are expected very soon now, and as the firm intends to pay more attention to this line than ever before preparations are being made for a big display. In speaking of the business for 1895 Mr. Maris said it was the heaviest they have ever done. When this firm moved from its building on Market street, west of Seventh, to the present location it was thought that there would be no trouble as regarded room. It appears, however, that "more room" is still the cry, and another building is to be secured which is to be used as a storage house. Theodore Maris, who had full charge of the business while his brother was away, was ably assisted by the well known and respected George Smythe.

THE DETROIT PLAN.

The Detroit plan is meeting with considerable success, and it is thought that enough proprietary manufacturers will have consented to abide by it to make it a go. The committee is still at work, and the reports received from them are encouraging.

### Notes of the Trade.

Theodore Maris, who has been confined to his home with a severe cold, is now able to be at the office.

Robert Shoemaker & Co., wholesale druggists, of Philadelphia, are making extensive alterations in their store fitting it up.

Prof. Edward Kremers of Madison, Wis., and Prof. Chas. Caspari of Baltimore were visitors to the College of Pharmacy during the previous week.

A. A. Weber, who lately purchased the drug store at Ninth and Locust streets, has made a number of changes, which has given the store a brighter and more cheerful appearance.

Miss S. L. Naly, class of '95, P. C. P., formerly apothecary at the Woman's Hospital, Philadelphia, has purchased a drug store at the corner of Eighteenth street and Pennsylvania avenue, Denver, Col.

Since Mr. Wingert purchased Snyser's drug store at Girard and Ridge avenues he has completly changed its appearance and has greatly added to its popularity. He has a beautiful soda fountain, and during the cold weather he furnishes a large number of hot drinks.

Charles Hires Company have now a handsome suite of rooms in the Bourse Building Notwithstanding the cold weather the manufacture of Hires' root beer is being pushed, as it is thought the business this year will be greater than ever.

On January 21 the usual pharmaceutical meeting will be held in the College of Pharmacy, at which F. B. Kilmer of New Brunswick, N. J., will present a paper on kola and kolavin. Mr. Kilmer will illustrate his lectures with stereopticon views. There will be also a paper on the influence of certain drugs on the character of the urine by F. W. Haussman; other papers will also be presented, but up to this time they have not been decided upon.

The State Pharmaceutical Examining Board of this State, through its president, Louis Emanuel, has made information against Dr. C. M. Van Sickle and Mrs. M. E. Van Sickle, of Munhall, charging them with acting as managers of a drug store without having the necessary certificate. A separate information is brought against them for allowing Andrew Suiller, an employee, to compound prescriptions without being under the immediate supervision of an authorized manager of a drug store.

### Bought Out by the J. Ellwood Lee Company.

In a circular issued under date of January 1, the J. Ellwood Lee Company of Conshohocken, Pa., announce the purchase of the entire plaster business of the late Grosvenor & Richards Company of Boston, including their machinery, good will, formulas, copyrights, trademarks, labels, etc.

The J. Ellwood Lee Company have also bought the entire business and rights of J. C. De la Cour of Camden, N. J., maker of a non irritating adhesive plaster whose merits have been known, principally in the South, for more than 40 years. It is made without rubber, and consequently is non irritating.

The J. Ellwood Lee Company say it will be manufactured under the immediate supervision of Mr De la Cour, who has become a member of the comany.

The J. Ellwood Lee Company have just erected a large factory and placed in it a new plaster mill at an estimated cost of $50,000.

### A New Pharmacy School in Alabama.

From a recent circular announcement we notice that the trustees of the A. and M. College, at Auburn, Alabama, have established a school of pharmacy as a department of this institution, which school is now organized as a full four years' course. The circular states that the "school is established to enlarge the usefulness of the college by presenting a course of education in which students may be well qualified for responsible positions in pharmacy, or well grounded for service as manufacturing chemists or analysts, or qualified by education in the natural sciences to enter upon the study of medicine.

## OHIO.

CINCINNATI, January 5, 1896.—Dr. J. C. Krieger, the well-known doctor and druggist as well as pioneer citizen, died at 4 o'clock on the morning of the 18th ult. The deceased, with his sons, conducted the flourishing drug store at the northeast corner of Court and Vine streets for many years. The deceased had been suffering for about three weeks with an abcess, which later developed septisemia. He was apparently cured of this, however, and appeared to be almost well, when he suffered a stroke of paralysis. This affected his entire left side and deprived him of consciousness. His son and a number of other physicians did all they could to save his life, but their efforts were in vain.

Dr. Krieger was one of the pioneer citizens of Cincinnati and was interested in many public enterprises. He was 62 years old, having been born in Germany, June 15, 1832. At the age of 18 he came to this country and settled in Cincinnati, engaging in the manufacture of machines with his brother. He held many public offices during the early part of his life. He was Assistant Tax Collector for 13 years and for an equal period represented the Twelfth and Thirteenth wards in the Board of Education as a Republican. He was scretary of the Concordia Lodge, Knights of Honor, of which he was one of the founders; an active member of the Pioneer Society of Cincinnati, being its secretary for the five years preceding his death. He was one of the oldest members of the Cincinnati Relief Union, treasurer of German Lodge, I. O. O. F., an active member of Nelson Post, G.A.R.; Judge of Elections in the Nineteenth Ward for a number of years and Assessor of the Thirteenth Ward for 12 years.

In addition to these offices he was for 23 years superintendent of the Sabbath school and organist of St. Paul's German Protestant Church, at the corner of Fifteenth and Race streets. He leaves the following children: Dr. Christ. Krieger, Oscar, a lithographer; Edwin and Miss Kate Krieger, the latter being a graduate of the Cincinnati College of Pharmacy and now in charge of the prescription department of the drug store at Court and Vine streets. The deceased was a gentleman of many admirable qualities of heart and mind, and he had a host of friends who will be deeply grieved at his death.

Dr. Chris. Krieger is one of the best known young physicians of the city.

### A Few Snap Shots.

S. S. Stewart has opened a new drug store at East Palestine, Ohio.

Karl Rudolph has succeeded G. F. Lynn, at Youngstown, Ohio.

Harry McClelland, New London, has sold out to W. L. Rhoades.

Gaylard Pharmacy, on Erie street, Cleveland.

Holiday trade with the druggists was as good as that of last year.

George Kylius received a horse and buggy from his wife for Christmas.

Dr. Louis Sauer, the West End druggist, is going to the inauguration of Governor Bushnell.

Druggist Daniels, on Central avenue, gave his neat little store a thorough overhauling for Christmas.

The traveling force of Schmidt & Co., the show case manufacturers, has been greatly augmented for the ensuing year.

Matt Yorston, at Twelfth and Central avenue, says his telephone is a pay station, but that it is for the good of humanity.

Louis Voight & Sons are selling more wall paper than they have for many years past. They have a number of new designs.

Dr. Louis A. Haber, the well-known druggist, has just returned from a trip to Atlanta and other points of interest in the South.

Will. S. Wagner, the clever pharmacist at Seventh and Vine streets, has just returned from an extended trip through the North.

Prof. Charles T. P. Fennell is authority for the statement that this will be one of the most prosperous years in the history of the College of Pharmacy.

Henry Miller of Cleveland, proprietor of the Gem Pharmacy, is about to open a branch Gem Pharmacy on Erie street, near St. Cloise.

Herman H. Koehken, the popular pharmacist, at McMillan street and Park avenue, Walnut Hills, has a mortgage on the store at Fourth and Mill streets, which was conducted by Robert Wray.

C. S. Johnson, who has conducted a pharmacy at Carthage for a number of years, has closed out his stock at that place and will engage in business at Greenville, Ohio.

Dr. John C. Otis, who now practices medicine in conjunction with running a first-class drug store, has had a great number of surgical operations to perform during the past six months.

Emil W. Bayer, the popular and well-known Vine street pharmacist, will be one of the graduates at the next commencement exercises at the Ohio Medical College. He will hang out his shingle.

Albert Ross, son of the druggist of that name, at Ninth and Vine streets, has been sued for a divorce by his wife, to whom he was married a short time ago. Neglect and failure to support were the grounds.

F. Suerbaum, the well-known pharmacist, who has been in charge of the prescription department at Bingel's Sycamore street pharmacy for the past 10 or 12 years, is very ill with an attack of pneumonia.

Louis Heister, the widely known druggist, at the southeast corner of Seventh and Elm streets, has one of the best trades in the city. He has gone to Kansas on a business trip. He has extensive interests out there.

Johnny Bauer, the druggist at Sycamore and Milton streets, accompanied the First Regiment on its recent trip to the Atlanta Exposition. Johnny is loud in his praises of the hospitality of the Southern people. He wants to go again.

The Stein, Vogeler Drug Company have named a brand of cigars after the *Enquirer*. The cigars are on sale in most of the down-town resorts and they are going like the proverbial "hot cakes." Every one praises 'em. The newspaper boys smoke them.

Among the large class which will graduate at the Medical College soon are druggists Ed. Neineman, G. W. Muench and Jacob Troth. We now have a large number of "pill rollers" in the city who write the suffix M.D. after their names.

The Druggists' National Fire Insurance Company is the name of a new fire insurance company which has recently been incorporated under the laws of the State of Ohio. The incorporators are: John Weyer, John Ruppert, Cincinnati; F. T. Bower, Toledo; W. R. Ogier, John Byrne, W. H. Lyfert, Columbus; Robert J. Eads, Indianapolis.

The B. F. Goodrich Company, manufacturers of India rubber, druggists' sundries, Akron, Ohio, are sending out a very cleverly gotten up price-list of the goods manufactured by them. Complete information is given in it as to the style and dimensions of the various tubings, rubber corks, etc., and the book should prove a useful one for a druggist to have for reference.

Grover Cleveland Healy has been stopping at the Grand Hotel for the past two weeks, taking orders for Johnson & Johnson. He tells your correspondent that orders have come in so fast as to use up all his blank order books, and he is now obliged to take orders on any kind of paper that comes to hand. Johnson & Johnson have offered three cash prizes this year, amounting to $1,000, to the three salesmen selling the most surgical goods bearing the red cross emblem. G. C. H. says he is going to take all of the prizes, and has ordered a new set of "think works."

A few days ago a man giving his name as J. A. Boist, and claiming to hail from Philadelphia, was arrested by the Covington police on the charge of adulterating drugs. The story was that Boist had sold something that he represented to be quinine, but which was much cheaper than that alkaloid. Boist was taken to a police station, but was not held as he said he made no misrepresentations and that all the druggists knew they were buying cinchonidia and not quinine. The case caused considerable talk in drug circles.

Robert G. Wray, the druggist at Fourth and Mill streets, filed a deed of assignment the other day, alleging dull times as the cause of his failure. He conveyed his property in trust to Charles C. Benedict, the attorney, who will administer for the creditors. The assets are placed at $3,800 and liabilities at $4,700. Creditors are also preferred in this case by chattel mortgage, one to Kate M. Wray for $1,100 and the other to Agnes M. Sutphin for $219.02. The assignee reached the store with his deed of assignment just in time to prevent the levy of an execution.

### A Kentucky Idea.

A decidedly novel invention to prevent jail breaking has been evolved by F. V. Simms, a druggist, of 549 Preston street, Louisville. Mr. Simms would surround prison cells with air tight compartments, filled with carbondioxide under a high pressure. In these compartments, too, should be small retorts, containing lumps of marble, covered by diluted sulphuric acid. Small rubber balloons, connected with electric batteries, are also an essential, but the main thing is that when the prisoner bores a hole through the wall of the cell he is asphyxiated, while at the same time the balloon will expand, bells will ring, and the turnkeys and keepers will be given warning that something unusual is going on. Whether they will reach the prisoner in time to resuscitate him or whether he will pay for his attempt to regain his liberty by his life, is an open question.

## MICHIGAN.

DETROIT, January 3, 1895.—The Christmas rush is over and last week merchant in all lines were busy trying to figure up the profits, for without exception there were profits of satisfactory dimensions. The down town drug trade as a rule made elaborate displays of novelties in the shape of perfumes and other standard sundries. While there are still a generous assortment left over for another year, still there was a big movement in these articles. Jobbers report that country merchants as well as those in the suburbs of this city, purchased a little heavier than usual this year and the demand appeared to be for a better class of goods.

#### TO REPEAL THE FREE ALCOHOL MEASURE.

The great drug, perfume and varnish interests of Detroit were much interested last week in a bill introduced in the House of Representatives at Washington, which provided for the repeal of the section in the Wilson Gorman bill providing for untaxed alcohol for use in the arts and medicine. Notwithstanding the plain intent of Congress to grant free alcohol, at least for use in the arts and in medicine, the manufacturing druggists, varnish makers and other concerns here were compelled to continue the payment of the former tax on the spirit, and litigation was instituted to determine the Secretary's right to ignore the law. What is known as the Sharp & Dohme case, which is still pending, was started in the Court of Claims at Washington to compel the Government to refund the tax paid on alcohol intended for medicinal use. The filing of hundreds of other claims followed, many of them by firms who are opposed to free alcohol, but who, of course, want the tax already paid refunded if the Secretary's action is declared illegal.

#### BIG CLAIMS.

An inspection of the docket shows that Parke, Davis & Co. of Detroit have already filed claims aggregating $65,000, which is probably increased to over $70,000 by tax on alcohol used to the present date. Frederick Stearns & Co. and other drug and perfume firms here have also filed claims, the total from Detroit perhaps aggregating over $200,000.

The refunding of this large sum of money would be all clear profit to the interested firms, as the preparations in which the alcohol was used have been sold at prices based on taxed, rather than untaxed alcohol. However, no matter how the legislation over the legality of the tax during the period which has elapsed since the passage of the law terminates, there is a strong

sentiment against free alcohol in the future, and the patent medicine lobby will find a strong opposition when they descend on Washington to oppose the passage of the McMillin bill.

### All Over Michigan.

George Menold opened a new drug store at Douglass, Mich., on January 1.

The Dunlap Company, not incorporated, succeeds Edwin Dunlap in the drug business at Kalamazoo, Mich.

I. D. Lane, formerly of Sand Beach, Mich., has purchased a drug stock at Butler, Ind.

T. W. Davison of Bay City has purchased the drug stock owned by C. D. Rahl.

Hunter & Park is the name of a new drug firm at Plymouth, Mich. They succeed the firm of Chaffee, Hunter & Lauffer.

Thomas Murdock, of the class of '94, University of Michigan, formerly with H. T. Wyatt & Co., Adrian, Mich., has gone into business at Northville, Mich.

Frank Williams, a druggist at Lowell, Mich., has been bound over for trial at Grand Rapids, on the charge of selling liquor illegally.

Leon A. Abbey helped himself to cigars in Sanford's drug store, at Grand Rapids, Mich., and was caught at it. He was fined $25 and costs.

Burglars entered the back door of Davis's drug store, at Grand Ledge, Mich., and stole $5 in change besides some goods.

Henry Neville of Menominee, Mich., has started a branch drug store at Wallace. This is a good location as there is no pharmacy in the neighborhood.

The White pharmacy at Tecumseh, Mich., owned by Druggist Beal of Ypsilanti, has been closed and the stock shipped back to the Normal town.

R. A. Abbott, formerly of the drug firm of Tinholt & Abbott, Muskegon, Mich., has opened a new store on Terrace street, in that city. L. M. Mills, representing Plummer & Co. of Chicago, took the order for the stock.

Elmer Prentice, a clerk in the drug store of Wheaton & Goodale, at Battle Creek, last week tried to light a gas jet. The head of the match flew off and set some celluloid goods in the window afire. The loss will amount to $75.

The old Moll drug stock at Saginaw, Mich., more recently known as the Birney Drug Store, has closed its doors, awaiting a sale of the property in order that the estate of Sarah I. Birney may be settled. The stock and fixtures are intact and the location is considererd one of the best in that city.

Fire last week destroyed several business blocks at Charlotte, Mich. Among the losers was H. H. Gage, druggist. The fire burned through the ceiling and the principal damage was done by water. His loss is estimated at $2,000; insurance $1,500.

The drug stock which has been owned at Grand Rapids, Mich., by J. G. Jackson, Dr. C. H. White and P. M. Doty, respectively, has passed into the hands of George P. Eddy of Shelby, Mich , who has opened for business under the personal supervision of W. T. Stringman.

C. A. Wilson of Holly, Mich., has sold his drug and book store there to H. M. Church, from whom he originally purchased it about eight years ago. Mr. Wilson was elected cashier of the First State and Savings Bank last May, and will devote his attention to the duties of that office. Mr. Church has taken possession.

The annual meeting of the Grand Rapids, Mich., Pharmaceutical Association was recently held, at which plans for a co operative manufactory were discussed, and a committee appointed to investigate. A report will be made at the next meeting. Officers were elected as follows: President, Will L. White; vice-president, W. K. Schmidt; secretary and treasurer, Benjamin Schrouder; trustees, B. E. West, J. D. Muir, J. E. Peck, R. A. McWilliams.

The drug stock of F. D. Baker at Flint, Mich., was recently damaged by fire to the extent of $1,000; insured.

A triple burial took place recently at Elmwood cemetery, Detroit. It told a silent but sad story. A few years ago Frank M. Sweeny was a trusted employe of Parke, Davis & Co. He went to Jersey City to take a better position. His wife and little boy accompanied him. Scarlet fever visited their happy home and in three days had claimed father, mother and boy. The remains were brought to Detroit.

## ILLINOIS.

### DRUGGISTS INDICTED FOR VIOLATING THE THE STATE PHARMACY LAW.

F. M. Schmidt, county member of the State Board of Pharmacy, and Frank Ullrich, his agent employed to investigate the methods of the 950 druggists in Chicago, went before the Grand Jury recently to procure indictments against about 50 druggists, against whom there were 60 charges of violating the State pharmacy law. The evidence collected by Special Agent Ullrich and presented to the Grand Jury resulted in indictments against the following :

F. Keene, 318 Milwaukee avenue.
J. Brod Chemical Company.
Hellmuth, 1047 North Robey street.
William Janney.
Moeller Bros. & Co., two cases.
L. Klein, Halsted and Eighteenth streets, two cases.
Klein Bros., Halsted street, two cases.
A. O. Selbug.
Garrison Bros.
Peter Van Schaack & Sons, three cases.
W. Dodd Miller.
George A. Bartran & Co.
E. H. Rosene.
D. Burlingham & Co.
C. F. Glass.
Kirth & Dougherty.
Robert Leonard.
A. C. Musselwhite, three cases.
Vary & Neff, two cases.
R. Meinung, 875 Milwaukee avenue.
Benner Hoeller, 1435 West Madison street.
J. Exclowski, Milwaukee avenue, three cases.
A. T. Hubka, 745 South Halsted street, two cases.
Michel & Pitzele.
J. F. Wallach.
Budthiewez.
Horl. J. Stamm.
F. Berger.
John Schocke.
American Pharmacy, two cases.
J. W. Reeves, manager.
Charles J. Hurbert & Co.
Frank Brothers.
A. E. Coombs, Thirty-eighth and Dearborn streets.
Siegel, Cooper & Co., two cases.
Frank E. Mackenzie.

The jury failed to find true bills against the following :

J. W. Tuohy.
G. W. Bastian.
White Brothers.
Matthews & Co.
Schliezer & Thomas.
J. G. Schauer.

Only two witnesses were summoned before the Grand Jury. They were Fred. M. Schmidt of the State Board of Pharmacy and Frank Ullrich, an employee of the Board, who worked up the cases. The work was under the direction of Mr. Schmidt. The testimony is all direct, both the witnesses having made purchases at the stores, or in other ways procuring the evidence.

The charges are brought under the special act and under the criminal code. The special act governing pharmacies forbids opening a drug store without having a registered pharmacist in charge, selling drugs without labeling them, or carrying on a pharmacy without having a pharmacist's certificate displayed conspicuously in the store. The criminal code covers the selling of certain poisons without registering the customer.

### PHARMACY BOARD FIGHTING ALONG NEW LINES.

"These present charges are the opening gun in a revival of our war against illegal drug selling," said Mr. Schmidt. "We have not been doing much for a year, and now we are going to proceed on different lines. We used to bring our cases up in justice courts, but that has proved unsatisfactory. You know the dilatoriness of the justice courts, and when we did secure convictions it did not amount to much. The druggists were generally willing to pay their fines and go right on violating the law. We concluded to do our work through the State's attorney's office, and we think it will be much more effective. I have no doubt that we can convict every one of those we have charged. In former cases the majority have pleaded guilty. We have worked up these cases very carefully and are sure of them. Mr. Ullrich has gone from place to place under my direction and secured the evidence, and we have discarded all those in which some points were lacking.

"There is no intent of persecution in this. We simply want to enforce the law. There are 904 drug stores in Chicago, and a good big share of them violate it. Some of the department stores have girls selling drugs, and it is evident that that is dangerous to life. The penalties will doubtless be greater than when inflicted by justices, and we hope to break up the illegal practice. We shall keep at it till we do."

### SINGER & WHEELER FAIL.

Singer & Wheeler, wholesale dealers in drugs, at Peoria, have confessed judgment for $38,000. They are a stock company, and Walter Barker, a stockholder for $5,000, has applied for a receiver. On November 1 President Singer stated the assets were $418,000; liabilities, $113,000. The company succeeded Singer, Wheeler & Co. in 1883, and have a capital stock of $250,000.

### News Notes.

The C. S. Mather & Sons Company have been incorporated at Chicago, with a capital stock of $20,000, to manufacture proprietary medicines. Incorporators, A. E. St. John, Edward St. Clair and D. C. Merriam.

The Executive Committee of the Chicago Retail Druggists' Association had a conference with the city collector and passed resolutions to wait on the Mayor

for the purpose of bringing about a better enforcement of the liquor ordinance. The collector will send a deputy around for two purposes, to explain the ordinance to druggists who started in business since the ordinance was passed, and then his deputy picks up evidence. Druggists must register every sale, and cannot allow any liquor to be drunk on the premises, neither for stomach pain nor for flavor in soda water.

## MISSOURI.

ST. LOUIS, January 2.—Several St. Louis pharmacists expected to begin the work of the new year by making up a stock of N. F. preparations according to the revised formulas. They expected the revised edition to make its appearance by December 15, but up to present writing it has not been seen. A few proprietors expected to make a present of a copy to their head clerks for Christmas. Some druggists are pretty good hands at scolding when things don't go to please them, and one or two have been ventilating their opinion pretty thoroughly because of their disappointment. In a few stores the N. F. preparations are running pretty low, as the proprietors are waiting the publication of the new manual before making up stock.

RUMORS OF ANOTHER WHOLESALE DRUG FIRM CONSOLIDATION.

The surprise and talk about the recent consolidation of wholesale drug firms in this city had scarcely subsided, when it was rumored that another large wholesale firm was about to consolidate with Myer Bros. During the past few weeks prominent officers of the two firms have been seen conferring together This may be taken for what it is worth. Inquiry of various officers of the two firms as to the truth of the report brought an emphatic denial.

DRUG CLERKS IN DEMAND.

Not for several years has there been such a demand for drug clerks as is experienced at present in St. Louis. German drug clerks are at a premium. One does not have to look far for the cause. A good share of the senior class at the College of Pharmacy held their positions until the new year. Warned by the experience of others, they knew better than try to clerk while coming in on the homestretch, as they call it. This threw several positions vacant, and at present writing there are several which are not filled. One and two years ago many of the boys held on to their positions during their senior year, and the result was several failed to pass in the spring.

### News Items.

The Allan-Pfeffer Mfg. Company, of this city, have changed their name as per affidavit filed at Jefferson City, December 24. Hereafter they will be known as the Allan-Pfeffer Chemical Company.

R. S. Vitt spent the holidays with relatives and friends at Washington, Mo.

Geo. Billerth, Jefferson and Arsenal streets, took a week's hunt in Arkansas about Christmas.

O. H. Fisher, 4161 Easton avenue, spent Christmas confined to his bed. He has been sick for some time.

Thos. S. Glenn, 2338 Washington avenue, celebrated Christmas in grand old Southern style.

W. R. Grant, 3718 Olive street, is just home from the Atlanta Exposition.

## NORTH CAROLINA.

### The Charity Prescription Question Disposed of.

RALEIGH, January 6, 1896.—The special committee on charity prescriptions of the Raleigh Board of Aldermen have submitted their report, which is as follows:

They have carefully examined into the matter and find abuses that can only be remedied by a radical change, they therefore recommend:

1. The abolition of the present system.
2. The election of a city physician who shall furnish and dispense his own medicine at a cost not to exceed $800 per year.

The adoption of this recommendation will, in our opinion, not only insure to the benefit of the poor of the city by securing better and more thorough attention, but to the taxpayers of the city in saving more than 33⅓ per cent. of the present cost.

There should be exacted of the physician certain requirements, such as a monthly report to the Board of Aldermen of the number of visits made, number of patients treated, number discharged, number of new patients received—ordinance concurring, which can be enacted at the January meeting.

This, we believe, will conduce to the prevention of inattention or neglect to any one.

The report was accepted, and on motion of Alderman Ferrall the following ordinance was adopted unanimously:

THE NEW ORDINANCE.

Be it ordained by the Board of Aldermen of the City of Raleigh:

1. That a Bureau of Charity be, and the same is hereby established, to be composed of the Mayor and three members of the Board of Aldermen to be nominated by the Board, for the purpose of managing and controlling all appropriations made by the Board of Aldermen for rendering medical assistance to the indigent sick of the City of Raleigh, who may be unable to employ a physican or buy medicine.

2. That the sum of $800 per annum, to be paid in monthly instalments of $66.66⅔ be, and the same is hereby appropriated, the same to be expended by said Bureau of Charity for the purposes set forth in section 1 above.

3. That, for the purpose of providing a proper system through which said Board of Charity shall render to the indigent sick of the City of Raleigh the medical assistance named in Section 1 above, the office of city physician be, and the same is hereby established by the Board of Aldermen, which office may be filled by one or more resident physicians of the City of Raleigh, as the Board of Aldermen may from time to time determine upon, to be elected by the Board of Aldermen, and who shall hold office for two years from and after election by the Board. Said city physician (or physicians, as the case may be) shall have an office centrally located within the city, at such place as said Bureau of Charity may designated, and shall keep the same open in such manner and at such times as said Bureau of Charity may direct, and shall render medical assistance to the indigent sick of the City of Raleigh who may be unable to pay a physician or purchase medicine, by examining, visiting, treating, prescribing for, and furnishing medicines to the same in such manner as said Bureau of Charity may direct, and shall perform all such other duties, and render all such other services, as said Bureau of Charity may direct to be performed and rendered. And such city physician failing to perform in a proper manner any duties imposed by this ordinance, or by said Bureau of Charity, or who shall abuse his office, shall forfeit his said office, upon conviction by the Board of Aldermen.

4. That said Bureau of Charity shall have full control and management of the appropriation made in section 2 above, shall direct to whom the same is to be paid, and how the same shall be expended and used, and shall have full power and authority to provide rules and regulations for said city physician (or physicians, as the case may be), including the duties to be performed, and the services to be rendered, and medicines to be furnished by said city physician (or physicians, as the case may be), and shall exercise a general supervision and control over the manner and methods by which the medical assistance provided by this ordinance is rendered to the indigent sick of the City of Raleigh, and shall make quarterly reports to the Board of Aldermen of all disbursements made by or through its direction.

Applications from Drs. James McGee, Jr., G. W. Renn, H. C. Upchurch, J. R. Rogers and A. O. Jones were read. Messrs. Hicks & Rogers, pharmacists, submitted a proposition to fill the prescriptions for $800, excepting proprietary remedies, and these to be sold at cost.

This practically disposes of the charity prescription question for one year at least, and very probably two years, if the action of the present board is not repealed by its successor.

The druggists of Raleigh have been supplying medicines for charity purposes at a slight profit, and it was customary with many to keep the moneys derived from this source separate and apply it to the payment of taxes, etc. They will hereafter have to get along without this source of revenue.

Drs. McGee and Renn are the physicians' choice for city "apothecary," and an office is now being fitted up for them and stocked with a full line of tablet triturates and compressions. They propose to treat the indigent sick with such tablets almost exclusively.

The two gentlemen who have been selected to fill the office of city "apothecary" are young physicians of Raleigh, and it is the opinion of the druggists of the city that the post will prove a splendid advertisement for them. But the druggists are the losers by the new arrangement.

### Wisconsin Board.

At the meeting of the State Board of Pharmacy held December 13 nine out of 37 applicants received first-grade certificates, as follows: T. E. Greenwood, T. Dorhorst, George Elsner, E. P. Benke Milwaukee; H. Thiemann, Reedsburg; Q. W. Frost, Washburn; W. H. Bodfish, River Falls; P. H. Sharp, Hurley, E. O. Whipple, Waterloo. Sixteen were given second-grade or assistant certificates, as follows: S. C. Czerwinsky, A. A. Rock, J. A. Huennekens, A. E. Haise, S. E. Piasecki, Otto Frank, Paul Enders, Milwaukee; F. A. Detloff, Madison; L. H. Allen, Geneva Junction; J. A. McKenzie, Madison; R. P. Sauerhering, Mayville; A. Bransted, Rice Lake; W. F. Gilley, Watertown; W. F. Kane, Shullsburg; F. Edna Bigelow, Brooklyn; J. W. Scott, Janesville.

### Kansas Board.

The State Board of Pharmacy held a meeting in Junction City, December 11 and 12. Certificates were issued to the following registered pharmacists: Paul Orlopp, Atchison; J. B. Manly, Quenemo; Douglas Miller, Newton; John Crafts, Alma; W. H. Somerier, Winfield; E. G. Graves, Agra; C. L. Lease, Wichita; W. G. Lorew, Marion; W. R. Shoemaker, Frankfort; O. C. Johnson, Cottonwood Falls; C. E. Lynn, Mankato; B. N. Bowen, Atchison; Calhs Johnson, Leonardville; R. N. Doherty, Belleville; Louis Freibelbis, Eureka; W. C. Hereford, Parkerville; H. O. Seitz, Ellsworth; Anthony Sharpe, Axtell; P. M. Richardson, Ellsworth; C. A. Noel, Summerfield; C. S. Stokes, Gueda; J. P. Hazlein, Whitewater.

Registered assistants: W. J. Littell, Kirwin; R. I. Wood, Abilene; A. W. Systia, Concordia; S. W. Row, Leavenworth.

### Washington State Board of Pharmacy.

At the meeting of the Washington State Board of Pharmacy, held at Spokane on November 18 and 19, there were nine applications for registration, six of whom applied for examination. The examination resulted in the registration of the following: W. H. Stowell of Spokane, C. A. Neyland of Davenport, Ernest Leeson, M.D., of Davenport, Valentine Brasch of Spokane, the last two named as assistants. Certificates were also granted to Oscar C. Godder of Holyoke, Mass., registered in Massachusetts; Charles R. Graham of New Whatcom, registered in Michigan, and Joseph R. Watson of Seattle, graduate of Ontario College of Pharmacy. The next meeting of the board was fixed for February 23, 1896, to be held at Tacoma. Applications should be filed with the secretary, W. H. T. Barnes, Seattle.

### Denver Doings.

Mr. Murphy, the popular clerk at A. G. Clark's pharmacy, is a N. Y. C. P. '85 man.

Jas. Reed, popular as ever, is still at Herrs' pharmacy, where he is always pleased to see a friend.

Mr. Mitchell, city man for J. J. Riethman, is an old Denver druggist and is well liked by all who come in contact with him.

Grebe & Taggart have moved their store from Seventeenth and Center streets, Denver, to 130 North Tejon street, Colorado Springs.

Wm. Dingle, who was one of the "early times" druggists in Denver, we learn has some very promising mining claims.

J. J. Smythe is again on the road holding up in his own peculiar, gentlemanly manner all his friends in the interest of the Moffett West Drug Company, which he so ably represents.

Wm. Roberts attends to the prescription counter and superintends the rest of the store at Ward's pharmacy. He has many friends and is extremely popular with the ladies.

F. B. Angell, the well known Seventeenth street druggist had a close call recently. Fire destroyed the rear of the Sheridan Block in which his store is located. Smoke and water, however, did some damage.

C. S. Kline takes great pleasure in owning and using a wheel. On two or three occasions both himself and the wheel looked a little the worse for wear, yet he never gave up, simply increased his accident policy and went right on doing business at the old stand.

### Colorado Board.

The following passed as registered pharmacists in the examination before the Board of Pharmacy, held in the Haish Building, Denver, on December 7 and 8: Harry R. Birch, W. F. Bowen, J. H. Coleman, Louis N. Depeyre, F. M. Farrar, E. K. Huddle, Harry S. Johnson, P. J. Kearns, M. G. Kimmel, E. G. Lewis, James F. Quinn, James Raizon, George F. Tiffany, George D. Woods.

## RANDOM NOTES.

T. E. Gibberd, traveler, for some years with Lyman, Sons & Co., Montreal, has taken an inside position with the house.

Luedke & Welborn, Leadville, Col., have ordered a new soda fountain from James W. Tufts, Boston.

Gethens Drug Company, Hamilton, Ill., have a new soda fountain made by James W. Tufts, Boston.

James W. Tufts, Boston, has under construction, at his factory, a fine onyx soda fountain for W. H. King & Co., Raleigh, N. C.

Underhill & Kittredge, Concord, N. H., are preparing for the coming season, and have ordered from James W. Tufts, Boston, a large onyx soda fountain.

At a banquet of the Vienna Pharmaceutical Society a popular student song was rendered in a slightly changed form, thus:

O serum, serum, o quae mutatio rerum.

A new wholesale drug firm has been started at Houston, Texas, under the firm name of R. C. Stuart & Wafles Drug Company, R. C. Stuart, Grafton Wafles and George W. Hyer are named as the incorporators, and the capital stock is placed at $8100.

### The Explanation.

We learn that one of the heaviest manufacturing concerns of the East, one whose advertisement appears in every medical journal in the land, and which claims to be one of the greatest sufferers by substitution, has obtained the written promise of the editors and business managers of over 80 per cent. of the medical journals of America to publish and live up to the following:

"Owing to the fact that substitution of drugs is practiced to a great extent, we earnestly request our readers to assist us by reporting to us all cases in which they have been the victims of this criminal offense, giving the names and addresses of impostors; also all particulars to substantiate their statements, such as sworn affidavits, etc.

"We will expose in our columns the names of such fraudulent dealers on receipt of satisfactory evidence.

"All our readers will admit that a doctor who prescribes a certain remedy expects that his prescription shall be filled accordingly. A druggist has no right whatever to use his own judgment in the matter; otherwise he places the reputation of the physician, as well as the life of the patient, in jeopardy

"Feeling that all doctors, honest druggists and manufacturers of legitimate proprietaries, will be benefited by our action in the matter, we solicit your assistance.

"The above notice must be a warning to druggists who believe that they are at liberty to substitute drugs."—*National Druggist.*

### A Loyal American.

Henry S. Wellcome, the well-known wholesaler, of Burroughs, Wellcome & Co. London, has evidently not forgotten that he is an American. He has purchased the portarit of Pocahontas, which hung in the Woman's Building, at the Chicago World's Exposition, and will, it is said, present it to the United States Senate.

### The Position of Iodine.*

In the early part of the present week the general condition of the drug market seemed to indicate that the year would pass away without any further alterations of importance in the quotations of the staple drugs. Such expectations, however, ceased to be entertained on Wednesday, when the word "iodine" was on the tongue of every frequenter of 'Change. Few seemed to have any clear knowledge of what was going on in the article; but all appeared to be under the impression that an important change in the price was about to occur. That impression must have been deepened by a circular which, as the result of a common understanding, the English manufacturers of iodides addressed to their principal customers on Wednesday night. This document, headed "Iodine and Iodine Preparations," announces that there is much uncertainty in the market owing to the fact that some parcels are being offered by holders outside the convention, and that the firms responsible for the circular think it desirable to notify this fact to the trade. Recipients of the circular are further specially warned "against any *low* offers" that they may hear of, and the opinion is expressed that it would be unwise to touch such offers under the present circumstances.

The firms who have issued this circular are no doubt genuinely anxious to further their customers' interests; but, quite naturally, they would rather see iodine maintained at its present figure of 9 pence per ounce than enter upon an indfinite period of violent fluctuations, or of starvation prices. It may therefore be assumed that they wish to paint the position in as rosy a light as the rather stormy looking background of facts permits. The undercurrents of the market in an article still controlled, nominally at least, by such a corporation as the iodine syndicate are always difficult to probe, as there are very few sources of information, the syndicate agent's utterances being of the scantiest, especially toward press representatives. In answer to our inquiries the syndicate broker informed us that "certain disagreements" existed among the Chilian producers of iodine; that a settlement was shortly expected; but that, in the meantime his principals could not give any quotations. This, though not a very succulent morsel of information for one who desired to get to the bottom of the matter, was something. In the first place, it showed that even the always outwardly optimistic broker of the iodine syndicate no longer goes about crying "Peace," where there is no peace, but admits the existence of a disintegrating element within his own army.

We are, however, in a position to supplement the syndicate broker's statements with the following others, which reach us from an excellent authority: Some days ago Messrs. Antony Gibbs & Sons, the consignees of the iodine syndicate, received a cablegram from South America authorizing them, if necessary, to cut the price of iodine down to a fraction of the recent quotation of 9 pence per ounce, in order to checkmate the ever-growing competition of "outside" producers. Although Messrs. Gibbs & Sons still hold their hands so far as acutual price-cutting is concerned, they have for a week or more been delivering iodine to

* *The Chemist and Druggist.*

their customers with blank invoices, accompanied by an intimation that the price for the goods is to be fixed within 90 days.

This state of things points to an extremely critical position of the drug, which, with its preparations, is one of the most important of pharmaceutical articles. The South American producers' convention was renewed on April 1, 1894, for three years, but the position of the syndicate toward the consumers at large is becoming more and more difficult. As we have repeatedly pointed out, the production of iodine is enormously in excess of the requirements, and the syndicate, while securing to its members an excellent profit on what it can sell, is only able to dispose of a small portion of what the producers can supply. Under these circumstances it is but natural that, in spite of the stringent clause in the convention binding its members to sell no iodine through any other sources, a constant supply of, shall we say "illicit," iodine keeps trickling into the London markets. The origin of these parcels, like the paternity of Mr. Yellowplush, is "wropt in mistry," but they get into consumers' hands all the same, and more of them every year. This leakage must be stopped if the syndicate is to hold out, and the circular of the iodide manufacturers, who are by interest allied to the iodine syndicate, shows the weapon wherewith it is sought to stop it.

The iodine syndicate on October 1 of this year (*vide C. & D.*, October 5, 1895, page 536) introduced a somewhat niggardly falling clause system in their dealings with the makers of iodides, who, in turn, handed down the concession to their clients, the consumers. Naturally, in buying from "outsiders," the purchaser receives no falling clause benefits. He pays the price bargained for, and there is an end of it. Now, say the iodine syndicate to the manufacturers, and these repeat it to their customers: "If you buy from any one but ourselves, say at 7 pence instead of at 9 pence per ounce, we may suddenly come down to 3 pence, and your 7 pence stuff will be a bad bargain for you. If, on the other hand, you deal with *us*, and the price breaks, we allow you the difference in kind."

We are afraid, however, that matters have gone too far to be mended, and that those interested in iodine preparations will soon have an opportunity of laying in stock at much lowyer rates than those now prevailing. A gentleman of much knowledge of the iodine industry said, in an interview published in our issue of December 22, 1894: "Iodine can easily be produced at 1½ pence per ounce." It would be interesting to watch the effect which a return to something like living margin rates would have upon the consumption of the article for technical purposes.

### Apolysin.

There are various combinations of citric acid wth phenetidin, all of which have been prepared by the chemical factory of Dr. F. von Heyden's successors. One molecule of citric acid can be combined with three molecules of phenetidin, giving us citrophen; but it can also be combined with two and with one molecule, giving us entirely different substances. Nencki and Jaworski have proved that the most useful of these combinations is that which contains the largest number of intact acid groups. This is apolysin, which contains two complete citric acid groups. Apolysin is also the most freely soluble of the series. It dissolves in 55 parts of cold water and in less than one part of warm water. There are metallic salts of apolysin, but it is the combinations with quinine, caffeine, etc., that deserve especial attention. Apolysin is stated to have the following advantages over phenacetin and the other remedies of that group: 1, It is very soluble, and hence more readily and completely absorbed; its action is therefore quicker and surer. 2, there are no by-effects, even when large doses are given; the well known cardiac depressant effects of phenetidin are not to be found in apolysin.

### A Snub to Early Risers.

Whatever may be your fad, it is certain sooner or later to receive the approval and support of the medical journals. From time to time they have discovered death in the milk jug, death in the teapot, death in wine, beer, tobacco, cycling, cricket, football, bathing and what not. The condemnation of the oyster was a heavy blow, and now we are asked to repudiate the principle of early rising. Speaking as one having authority and not as the scribes, the *British Medical Journal* makes bold to say that the early rising theory is a mistake, that the vital forces do not come fully into play until midday, and that the desire to get up with the lark, so far from being a sign of strength of character and vigor of body, denotes advancing age.

Such a doctrine is nothing short of revolutionary. It not only throws cold water upon the claims of the early risers, but by a parity of reasoning it extols that numerous class, the lazy lie-abed, who, we are now given to understand, are the salt of the earth. Frankly speaking, while inclined to rejoice at the snub administered to the early risers, I am unable to agree with the *British Medical Journal*. I wish I could, but all the scientific evidence seems to point to the early riser, or, let me say, the short sleeper, as the coming man.

Primitive man, like monkeys and birds, having no artificial light, must have gone to bed at nightfall, to sleep until sunrise; there was nothing else for him to do. Down to the last century civilization exhibited little change in this respect, all modes of artificial lighting being so poor that there was no inducement for anybody to turn night into day. The electric light, however, may conceivably enough make man independent of the light of day for the carrying on of business. In such an event the fittest type of man will surely be he who can keep awake longest, and get through the most work in 24 hours. I believe that the philosophy of "early to bed and early to rise" is a survival of the old conditions. "Work while yet it is day," says another authority, "for the night cometh when no man can work." That was a rash assertion. It could not have been enunciated at the end of the nineteenth century. A very great deal of the labor is done by night and the practice is sure to extend.

This being so, all the 24 hours, in fact, being now available for work, the man who wants a long sleep, rather than a short one, will assuredly be at a disadvantage in the struggle for life. If the Darwinian theory is true, therefore, he will tend to die out—*i. e.*, to be replaced by a more active organization adapted to the new conditions.—*Pall Mall Budget.*

## HINTS TO BUYERS.

We acknowledge the receipt of a very cleverly designed and artistic Xmas card from the Harry Wiltshire Engraving, Printing and Embossing House, 120 Fulton street, New York.

E. B. Read & Son, 7 N. Charles street, Baltimore, issue a handsome sample card, showing specimens of druggists' labels, boxes, &c. Druggists will find it to their advantage to write for copies.

The December price-list of the Robinson-Pettet Company, wholesale druggists, Louisville, Ky., should prove a profitable pamphlet to Southern druggists. It contains a number of advantageous propositions on certain lines of goods for the holiday trade.

The Mattson Rubber Company of 241 Greenwich street, expect to issue their 1896 catalogue of druggists' specialties within a few days. The list will include a complete line of Rubber Goods used by the trade, with prices that will cause considerable comment.

C. F. Boehringer & Soehne, 7 Cedar street, New York, report an unusually active sale for their Ferratin tablets. So great has been the demand, in fact, that on several occasions delay on the part of bonded warehouse people in delivering orders has caused serious incovenience. An average of 150 ounces a day sales has been maintained for some time, and since the holidays the trade has been even greater.

Johnson & Johnson have been compelled to add a four-story building, hitherto unoccupied, to their factory at New Brunswick, N. J., because of the boom that has been given to Vino-Kolafra and others of their preparations by generous, and, at the same time, judicious and novel advertising methods. The structure will be devoted entirely to the manufacture of the Kolafra preparations of the house.

"Pabst" announces that the next series of "Best Tonic" ads. will be embellished with figures taken from the era of highest Gothic development (between the years 1100 and 1400). The history of brewing begins with Egypt, but the art of brewing was developed by the Germans, which is given as a reason for the Germanic ads. that are to succeed the Egyptian. German type will not, however, be used. The announcement of what the ads. will be like is being made in popular periodicals, which seems a good way of drawing attention to the advertisements before their appearance.

### Do Not Hide Your Light.

No matter how good a pharmacist a man may be he will not be a financial success unless he lets the people know where he is, and of all the various methods of doing this none is more striking and effective than that furnished by Thos. Hughes, 25 Clinton place, New York, in his illuminated mortars, one of which is illustrated herewith. These mortars are striking and attractive in appearance, whether by night or by day, and probably give a relatively greater amount of advertising in proportion to the cost than almost any other medium. Druggists seeking to increase their business should write at once to Thos. Hughes, 25 Clinton place, New York, for this illustrated price-list showing various designs, and when writing mention the AMERICAN DRUGGIST.

## Local Anæsthesia by Infiltration.

A very interesting paper on the value and uses of the new infiltration anæsthesia method has just been issued by John Wyeth & Brother, manufacturing chemists, Philadelphia. They have prepared tablets for extemporizing the necessary solutions to be used in this method, and considerable interest in the matter has been aroused among physicians, making it a subject of much import to pharmacists.

John Wyeth & Brother announce that they are prepared to furnish the following sizes of these soluble compressed tablets:

TABLETS TO MAKE 100 MINIMS OF SOLUTION.

NO. 1.—STRONG.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | 1-5 |
| Morph. hydrochlor. | 1-40 |
| Sodium chloride, C. P. | 1-5 |

One tablet dissolved in 100 minims of water yields the strong solution, representing:

1-500 part of cocaine hydrochlor.
1-4,000 part of morph. hydrochlor.
1-500 part of sodium chloride,

or each 1,000 minims contain

2 grains cocaine hydrochlor.
¼ grain morph. hydrochlor.
2 grains sodium chloride.

NO. 2.—NORMAL.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | 1-10 |
| Morph. hydrochlor. | 1-40 |
| Sodium chloride, C. P. | 1-5 |

One tablet dissolved in 100 minims of water yields the normal solution, representing:

1-1,000 part of cocaine hydrochlor.
1-4,000 part of morph. hydrochlor.
1-500 part of sodium chloride,

or, in other words, each 1,000 minims of this solution equal:

1 grain cocaine hydrochlor.
¼ grain morph. hydrochlor.
2 grains sodium chloride.

NO. 3.—WEAK.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | 1-100 |
| Morph. hydrochlor. | 1-40 |
| Sodium chloride. | 1-5 |

One tablet dissolved in 100 minims of water yields the weak solution, representing:

1-10,000 part of cocaine hydrochlor.
1-4,000 part of morph. hydrochlor.
1-500 part of sodium chloride.

or each 1,000 minims of solution contain:

1-10 grain cocaine hydrochlor.
¼ grain morph. hydrochlor.
2 grains sodium chloride.

Should more than 100 minims be required, use one tablet for every 100 minims of water used.

TABLETS TO MAKE 500 MINIMS OF SOLUTION.

NO. 4.—STRONG.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | 1 |
| Morph. hydrochlor. | ⅛ |
| Sodium chloride, C. P. | 1 |

One tablet dissolved in 500 minims of water yields the strong solution.

NO. 5.—NORMAL.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | ½ |
| Morph. hydrochlor. | ⅛ |
| Sodium chloride, C. P. | 1 |

One tablet dissolved in 500 minims of water yields the normal solution.

NO. 6.—WEAK.

| | Grain. |
|---|---|
| Cocaine hydrochlor. | 1-20 |
| Morph. hydrochlor. | ⅛ |
| Sodium chloride, C. P. | 1 |

One tablet dissolved in 500 minims of water yields the weak solution.

Should more than 500 minims of solution be required, use one tablet to every 500 minims of water.

In cases where the solution is desired to be stronger or weaker than the normal solution, but being of the same relative proportions of cocaine, morphine and sodium chloride as in the normal solution, all that is necessary is to either increase or decrease the quantity of water to be used to each tablet of the normal recipes No. 2 and No. 5.

Special attention is called to the fact that in the normal (No 2), strong (No. 1) and weak (No. 3) tablet, only the cocaine hydrochlorate varies, while the morphine hydrochloride and the sodium chloride are the same amounts in all three recipes. This also applies to Nos. 4, 5 and 6. The tablets are put up in tubes of 20 tablets each, in cases holding ten tubes, and also in larger packages, such as 100's, 500's and 1,000's.

Druggists who are interested in the subject should write to John Wyeth & Brother, Philadelphia, for copies of recent pamphlets which this firm have issued.

## A Celebrated Old Monastery.

Nearly 500 years ago, or to be more exact, on September 8, 1496, the foundation was laid for the Certosa di Pavia, the most splendid monastery in the world. Twenty-five Carthusian monks were appointed to take charge of this sanctuary, and for nearly four centuries it remained in charge of this order, and then passed through the hands of other orders, and was closed in 1810. The monks were re-established in 1843, and the building is now well cared for, being kept up by 25 monks, who derive some revenue from the Monks' Garden and Vineyards. This monastery, like other famous ones, including that at Chartreuse, is surrounded by extensive vineyards. All the great sculptor-architects worked in succession on this "miracle of beauty," and this may account for the sustained perfection of style. It has been said that it is a wilderness of lovely workmanship. It is from this place that the celebrated liquors come, among them the celebrated Robbia Amaro Bitters. We present herewith a small illustration of the monastery. American travelers in Italy never fail to see this noble specimen of architecture when in the vicinity.

MONASTERY OF CERTOSA DI PAVIA, ITALY.

## Therapy of Phenocoll.

In a lengthy article, entitled "Contribution to the Study of the Anti-Malarial Action of Phenocoll," by Dr. Gino Righi, Padua, and published in the *Rassegna Medica*, the author concludes: The results attained with the new remedy are therefore most encouraging and lead to the following conclusions: 1. Phenocoll hydrochloride is an anti-malarial remedy equal or more than equal in efficacy to quinine, and can be prescribed with confidence. 2. It not only overcomes the febrile temperature of malarial patients, but it reduces the enlargements of the spleen and the evil consequences arising from it. 3. Its action is most pronounced when administered in small doses every hour for five hours previous to the expected return of the febrile access. 4. It is innocuous to the organism, and no undesirable symptoms or disturbances arise even from continued administration daily. 5. Its taste is only slightly bitter, and can be easily corrected, so that it is readily taken by children.

## Will Be Unique.

Mrs. Gervaise Graham, the well-known manufacturer of Cucumber and Elder Flower Cream, and a large line of other Cosmetics, will do some unique and original advertising in 1896. She will publish a really handsome magazine, entitled *Beauty*, issued bimonthly; the first issue of 25,000 copies will be ready early in January. The magazine will contain articles on diet, bathing, exercise, the care of the complexion, hair and hands, and everything pertaining to the cultivation of health and physical beauty. Druggists who handle Mrs. Graham's preparations and her lady

agents will be furnished the *Beauty* magazine free for distribution to their lady patrons. Druggists wishing to secure copies should address Mrs. Gervaise Graham, 1424 Michigan avenue, Chicago, Ill.

### Not Norwich, Conn.

In a recent reference to the business growth and development of the Norwich Pharmacal Company, Norwich, N. Y., we inadvertently placed the firm at Norwich, Conn. As some delay and confusion in answering inquiries has occurred to the Norwich Pharmacal Company in consequence, we desire to call attention prominently to the proper address of the firm, which, as stated above, is Norwich, N. Y.

### The African Kola.

Lehn & Fink have just received a shipment of fresh and handsome Kola Nuts direct from the Congo, Southwest Africa. The nuts, which have an odd appearance to most people, are put up in queerly shaped baskets that recall stories of the fierce cannibals and trackless forests of Africa.

### Sweets from Canajoharie.

Canajoharie, N. Y., although over 50 miles from Albany, the State capital, has been considered a capital place ever since it was associated with the names of Arkell, Willet Cook and others equally popular.

The town is now further advertised through the publicity secured in various magazines for "Pettit's Chocolate," which is manufactured by parties located in the place.

### Upjohn's Pills Have the Call.

The Upjohn Pill & Granule Company of 60 Maiden lane, claim to have had in 1895 the most successful year of their existence. Sales for the year were fully 20 per cent. over any other twelvemonth, while the prospects for continued good trade are unusually bright.

### An Innovation in Price-Lists.

C. G. Bacon & Co. of 218 Greenwich street are soon to issue a catalogue to the trade which will embody a distinctly new feature so far as publications of this class are concerned. Those who know the work involved in the production of a catalogue, and who have been accustomed to seeing "annual" catalogues, without prices, issued about—once every four or five years, will be surprised to hear that Bacon & Co.'s catalogue is to be revised and published once a month. It will be a complete catalogue, too, of the drugs, chemicals, patent medicines and the leading drug sundries in use, and will contain a full and complete price-list, making altogether a book of about 300 pages. Just 10,000 copies of the catalogue will be distributed to the trade every month, immediately after publication, and it is pointed out that the prices quoted will be lived up to. C. G. Bacon & Co. say there will be no hiding behind the old pretext, "subject to market fluctuations," which has made most drug catalogues almost worthless. The work of getting up the book has been something phenomenal, taking up fully six months, but it is believed that it will fully repay the compilers for their labor.

### Ferratin Prescriptions.

Pamphlets containing scientific reports on ferratin are being sent to all physicians in the United States. It is also advertised in over 60 of the leading medical journals of this country, and is now favorably mentioned in all new editions of text-books on materia medica and therapeutics. This insures prescriptions for the drug. Ferratin is supplied in powder form in 1-ounce bottles, and in ½ gm. (8-grain) tablets in 1-ounce tin boxes. Powder and tablets are furnished through all wholesale druggists at $1.15 per ounce. Literature will be mailed free to druggists on application to C. F. Boehringer & Soehne, 7 Cedar street, New York.

### For Steam Heated Apartments.

It has often been noted that a steam heated room is liable to give a feeling of depression on account of the dryness of the air. To counteract this difficulty, the Vapor Valve Mfg. Company, 26 Cortlandt street, New York, have a device and are placing upon the market a simple little contrivance called the Vapor Valve, which is attached directly to a steam radiator, and in which a small amount of escaping steam passes through asbestos which has been slightly moistened with a few drops of cresol, trikesol or "sanitas" for disinfecting, or some extract for perfuming the room. This simple device does its work perfectly and has already been introduced into many hospitals, offices and private houses. Any one interested in the Vapor Valve can procure additional information by writing to the manufacturers and mentioning the AMERICAN DRUGGIST.

Valhalla
TRADE MARK

With the Norsemen "Valhalla" stands for a feast, and the goods of the Valhalla Mfg. Company are of such a quality that they are entitled to the same meaning. Among the products of this company is Phosphated Beef, Iron and Wine, which has been indorsed by one of the leading Chicago jobbers as being equal to any on the market. Prices and particulars will be found in their advertisement, which appears on another page, or can be obtained by writing the Valhalla Mfg. Company, 228 Washington Boulevard, Chicago.

### Essential Oils.

McKenzie Brothers & Hill, manufacturers and importers of essential oils, perfumery, fine drugs and chemicals, 52 Water street, New York, with branches at 26-28 India street, Boston, and 604 Arch street, Philadelphia, and factory and laboratories at Watsessing, N. J., issue a monthly wholesale price-list of their manufactures and importations. The January number notes the arrival of new crop oil of bergamot. Oil of camphor is advancing. Referring to oil of cinnamon, McKenzie Brothers & Hill make the point that they endeavor to handle only pure oil, testing over 70 per cent. cinnamic aldehyde. Adulterated oil is reported on the market and on the way from China. The market for Ceylon oil of cinnamon is reported to be advancing. The same is noted with regard to oil of citronella, which is likely to advance in price owing to scarcity. McKenzie Brothers & Hill import this oil and guarantee quality. Oil of clove is distilled by this firm from selected clove buds in their own factory, in Watsessing, N. J. In Messina essences (which, by the way, is spelled "Mesina" in this price-list), McKenzie Brothers & Hill aim at handling only selected oil of highest grade, and as an evidence of this purpose they inclose with each package a certificate of purity from a well-known firm of Messina chemists and their seal is attached. The circular states that oil of rosemary is expected to advance. Oil of sassafras is manufactured by McKenzie Brothers & Hill on a very extensive scale, and they make the claim of being the pioneer manufacturers of the synthetic oil which is now so largely used. As to synthetic oil of wintergreen, which is now official in the United States Pharmacopœia, under the title methyl salicylate, McKenzie Brothers & Hill point out that they are manufacturing it on a large scale in their factory in Watsessing, N. J., and they speak of its superior quality, sweetness and lasting properties as compared with the ordinary oils in the market.

### A Showcase Free.

A sheet of writing paper water marked with the word "Shearer" in the center of sheet, or "Shearer" on the box or "Shearer" on the bands is a guarantee of the quality. Write at once, J. D. Shearer Company, Pittsfield, Mass., for druggists' designs and free samples, and learn how to obtain an elegant showcase in polished oak, free of charge.

### Court Plaster as an Advertiser.

To those not intimately concerned in the wholesale marketing of plasters it is not generally known what a big figure is cut in the court plaster trade by the advertising people. Court plaster, to be given away gratis, is a staple article with the Accident Insurance Companies, who purchase great quantities every year—one concern in Chicago ordering 1,000,000 pieces of plaster at a time. Advertising novelty men also buy in big lots, while the makers of little conveniences for the toilet, such as silver and gold plated court plaster holders, invariably call for stock around holiday time.

### Uses for Old Corks.

Corks are thrown away in great quantities, and very few people think that there is any value attached to that material after it has served its purpose once as stopper of a bottle. Nevertheless it has become one of the most valuable components of a city's refuse. Great quantities of used corks are now used again in the manufacture of insulating covers of steam pipes and boilers, of ice boxes and ice houses and other points to be protected from the influence of heat. Powdered cork is very useful for filling in horse collars, and the very latest application of this material is the filling in of pneumatic tires with cork shavings. Mats for bathrooms are made of cork exclusively, and it also goes into the composition of linoleum. Cheap life preservers are now filled exclusively with bottle stoppers, cut into little pieces.

## STARTING IN BUSINESS.

In view of the great accumulation of evidence and the general progressiveness of the times, it strikes me as peculiar that so many young pharmacists starting in business should require so strong urging to go about it in a manner that will best conserve their own interests. It is easy to understand how a druggist having been in business for a number of years has adopted and become wedded to a system of conducting it that nearly every other wide awake merchant has long since discarded. It cannot be lack of ambition, education above the ordinary, attention to detail, or disposition to work. All these are demanded before he has become a competent member of his craft and the law so interposes and requires of him what it requires of no other merchant or dealer.

In the preparatory routine of this work he must undergo a mental training quite severe and stretching over a period of several years. Is it not possible that in this careful preparation and attention to detail he has lost somewhat his grasp upon the larger problems and possibilities connected with and demanded by a highly successful business of to-day? This seems to me the only fair interpretation to be given of that lethargy toward an improved manner of conducting business which the times are so imperatively demanding of those who propose to train in the front ranks.

If you cast your eye along the line of endeavor in every field of activity, whether of travel, manufacture, commerce, science, learning, or the arts, it is easy to note the rapid improvements of the past 20 or 30 years. It will be readily apparent to any one brought in constant contact with the newer seekers for honors or wealth in the drug field, as I am, that among 75 per cent. of them there is a disposition to ignore the plain teachings of the times and try their fortunes over the old rut-worn course of their fathers of 30 years ago. The stage coach in which our ancestors traveled was the best mode of locomotion the times afforded and must perforce answer their needs.

There is little excuse, however, to the present generation, or any number of them who should now satisfy themselves with those methods when others, ten times more comfortable and rapid, will land them at their destination. You can

PRESCRIPTION DESK IN THE FLEMISH RENAISSANCE STYLE


# WE REALIZE

That Retail Pharmacists are too conservative and high-minded to be secured as REGULAR friends and customers by mere words and statements; hence our advertisements are solely the means we take of bringing ourselves to notice and soliciting TRIAL patronage.

Our ATTENTION and DEVOTION (not philanthropic, but business) to the interests of those who favor us with their custom is the means of our success, and is the reason that, in the past year,

## *The Size of Our Business Just Doubled!*

We have customers in every State in the Union, except two or three, and their motto seems to be:

**"BUY ONCE FROM BACON, ALWAYS BUY FROM BACON."**

We gladly mail our "Special Weekly Price-Lists" upon application, and we show below the advantages our customers had last week.

| | | | |
|---|---|---|---|
| Opium (Natural), | $2.05 | Cocaine (ounces), | $4.75 |
| Castile Soap, White (Conti's), | .09¾ | Citric Acid, | .38 |
| Bromide Potash, | .39 | Sub. Nit. Bismuth, | 1.00 |
| Flaxseed, | .02¾ | Powdered Opium, | 2.40 |
| Alcohol, (Webb's), | 2.35 | Camphor (ounce squares), | .59 |

C. G. Bacon & Co.

**Wholesale Druggists and Manufacturing Chemists,**
**218 Greenwich St., New York.**

***Kindly mention this Journal when writing to Advertisers.***

easily see here the absurdity between these two situations, because you understand and are familiar with both. The absurdity of going about the drug business in the manner of your fathers is just as apparent to me because I have lived and done business in both periods, and the hundreds of cases on both sides coming within the limit of my experience has given me great familiarity with all styles and methods.

This embraces a great many different things regarding the conduct of the business to which my observation is constantly drawn, but I am more particularly calling attention to the style and manner of fitting up the store to meet the growing demand for taste so much required at the present time. There has never been a time, I venture to say, when a nicely fitted store was not a better factor to the building up of a successful trade than a cheap one.

Also, there has never been a time within my experience when the contrast between the results has been so marked or the want of fine stores is so imperative as to day. I passed to day two stores on opposite sides of the same street, not a block apart, with no advantage to either, that I can see, in location. The one was an old-timer of 40 years ago, and the other made by me about three or four years ago. The old one does not do a business of $5,000 a year, the other exceeding $20,000. In the one case the store is old-fashioned and the methods as well; in fact, one seems to beget the other. The newer one is bright and up-to-date. It is my business to build the store and promote the ideas that make it successful. In fact, the store itself is a long step in the right direction, without which the other is very hard of accomplishment. The beginning of the new year is a proper time to consider these matters, and I can be of great service to you when you need me. C. H. BANGS.

BOSTON, 406 Washington street.
NEW YORK, 35 Murray street.
PHILADELPHIA, 1416 Chestnut street.
CLEVELAND, 1 Public Square.

## NOTES ON PRICES.

### The Chemical Market.

The Roessler & Hasslacher Chemical Company, 73 Pine street, New York, and 56 Fifth avenue, Chicago, issue their usual monthly prices current under date of January 4. Referring to the prospects for the new year and the present condition of business, the circular states that there is good reason to assume that the present year will be a prosperous one, for the only obstacle, the unsatisfactory condition of the country's finances, will after all, it is hoped, find remedy at the hands of Congress. A sure barometer of the present good condition of business is the continued upward movement in prices, affecting at this date even articles in our line that were subjected to the keenest competition. One of these articles is

*Acetanilid.*—Its price, although still below the proper level demanded by actual cost based on the higher price of its raw material, has advanced slightly and may improve still further.

*Aniline Oils and Salts.*—The reduced demand during the past month has brought a slight reaction in the price of aniline salt, and stocks, in hand of second holders, are therefore held at lower prices. The situation of the first hand and of the raw material abroad remains unchanged and firm.

*Benzoic Acid* is higher in price.

*Peroxide of Sodium and Peroxygene.* – The field of usefulness for these splendid bleaching agents is continually broadening, and now embraces not alone wool, fibrous substances, horn, bone, etc., but also oils, fats and the like. R. & H. ask the trade to write for circulars, which give full directions as to its manipulation for the various uses.

*Quinine.*– Under date of December 18 Roessler & Hasslacher announced an advance to 28c. per ounce in the price of sulphate, the list of salts advancing proportionately.

*Yellow Prussiate of Potash.*—The market continues firm, although stocks in the hands of some dealers, due to the usual holiday dullness, have been offered at considerably reduced prices.

## Wholesale Druggists' Prices.

Changes in these prices during the past week have been unimportant though somewhat numerous. The fluctuations are noted in the following paragraphs, together with appropriate comment on the causes influencing the change.

*Acids.—Muriatic, C.P.*, can be purchased in pound lots down to the point of 18c., the range now being 16c. to 18c. *Nitric, C. P.*, has marked a decline of 2c. in sympathy with the lower prices for basic material; 18c. to 20c. is now the range as against 20c. to 25c. previously quoted. *Sulphuric* is also lower, 14c. to 16c. being now quoted. *Tartaric* has hardened a trifle in sympathy with the market for argols; quoted 35c. to 40c.

*Aloin* is quoted lower, the active principle sharing in the reduced prices for crude gum. Ounces can now be purchased for 10c. to 14c.

*Alum* is cheaper in powder and 6c. to 8c. will now buy. Burnt, powdered, has declined to 12c. to 15c.

*Apiol.*—Prices have been revised with 45c. to 49c. quoted as against 54c., the previous figure.

*Cadmium bromide* and *Iodide* have been marked down during the interval; 15c. to 20c. will buy the former in ounces, while the quotation for the latter stands 37c. to 41c.

*Caffeine* still continues irregular with several changes in price to report since our last. *Alkaloid* is 10c. lower, being quoted 85c.; *Bromide* has been marked down to 75c. to 85c., according to quantity; *Citrated* is 73c. in ½-oz. vials, and *Valerianate* is quoted $1.15.

*Cinchonidine sulphate* offers at a fraction less; 5 oz. cans quoted 8c.

*Codeine*, both alkaloid and sulphate, have tumbled appreciably; $4.05 to $4.25, to $3.20 to $3.40 are the respective quotations, marking a decline of from 40c. to 45c.

*Ferratin* is an accession to our prices current. The manufacturers' price to retailers is $1.15, in ounces, in powder or tablet form.

*Gum opium* is higher, and the opinion is expressed in some quarters that a further advance is among the things to be expected. Whole gum is quoted $2.10 to $2.25, and powdered $2.60 to $2.75.

*Insect Powder* prices are steadier, and 25c. to 26c. is now quoted.

## Review of the Wholesale Market.

NEW YORK, January 9, 1896.

*It should be understood that the prices quoted in this report are strictly those current in the wholesale market, and that higher prices are paid for retail lots. The quality of goods frequently necessitates a wide range of prices.*

Little of interest has transpired in any of the various departments of Drugs, Dyestuffs and Chemicals since our last report. It is yet too early to look for any marked increase of business, as dealers generally are giving their attention to overhauling their stock, and the traveling salesmen who contribute so much to swell the bulk of trade are at home. The proposed increase of tariff duties and the condition of national finances have both had their effects in bringing about a certain amount of uncertainty as regards the future course of the market. There have been no new developments in quinine, and the higher prices recently established by the manufacurers are well sustained. Further speculation in opium has led to a decided hardening in values, and higher prices prevail for all varieties. With regard to prices generally, the tendency of values is steady to firm, with few changes of a lower character to report.

| ADVANCED. | DECLINED. |
|---|---|
| Acetanilid, | Salol, |
| Opium, | Balsam fir, |
| Cascara sagrada, | Balsam Peru, |
| Morphine, | Cod liver oil, |
| Sassafras bark, | Orris root, Verona, |
| Cascarilla bark, | Caffeine, |
| Japan wax, | Gum shellac, |
| Colocynth, | Vanilla beans. |
| Carbolic acid, | |
| Chrysophanic acid, | |
| Lithium salts. | |
| Gum chicle, | |
| Epsom salts, | |
| Black cohosh root, | |
| Cream tartar, | |
| Rochelle salt, | |
| Seidlitz mixture, | |
| Tartaric acid, | |
| Bayberry bark. | |

**DRUGS.**

*Acetanilid* has recovered somewhat, higher prices for the crude product influencing a corresponding advance in refined; 26c. to 28c. and upward is generally quoted.

*Alcohol* shows no change from the prices recently established. A meeting of the combined producers was held recently, at which it was expected that an agreement would be reached for a general reduction of 2 cents on the gallon. Corn has declined materially in value of late, and it was thought that alcohol prices should reflect this in the same way that other corn products do, glucose for example, but no action was taken.

*Balsam Copaiba* continues in fair moderate request, with sales upon the basis of 32c. to 35c.

*Balsam Fir*, Canada, has remained quiet, and prices are less firmly maintained, a few dealers shading a cent or two, though $2.15 to $2.25 is generally asked, as to quantity. Oregon continues quoted at 60c. to 65c. in barrels and 70c. to 75c. in cases. We hear of no sales of consequence of either variety.

*Balsam Peru* is rather neglected at the moment and the movement is light, with $2.30 to $2.40 now quoted.

*Balsam Tulu* is in better supply and values are slightly easier, though nothing

offers in a jobbing way below 52½c., while 55c. represents the outside range.

*Barks* of all kinds are jobbing fairly, and one or two varieties have developed marked firmness. *Cascarilla* cannot now be purchased below the point of 7c., with up to 8c. asked. *Sassafras* has been in good request during the interval, and the market is firm at a slight advance; prime grade bark is held at 7c. to 9c., the latter figure being quoted for extra select. Ordinary quality offers at 6c. *Cascara Sagrada* has been taken in a very spirited manner for both domestic and foreign orders, and prices have advanced a notch or two, 4c. to 4½c being now asked for old, and 3½c. for new.

*Bayberry* is reported scarce, with nothing offering below 15c. Sales for export have been made down to the point of 11c.

*Beeswax* continues in fair request, with numerous small sales at the range from 32c. to 33c., as to quantity, though we hear of sales in some instances at a fraction less.

*Cacao Butter* is generally held at 32½c. to 33c. for Dutch bulk, with numeruso small sales reported at this range.

*Cassia Buds* appear well sustained at 18c. upward, but some lots could have been secured at ¼c. if, indeed, not at ½c., under that, spot delivery.

*Cocaine* is expected to advance soon to correspond with the higher prices now prevailing in the foreign markets.

*Cod Liver Oil* has been a trifle unsettled as to values, owing to more or less sharp competition between a few local holders. Offers to sell at $49 to $49.50 were made, and considerable business resulted, though quotations are fairly well maintained by the bulk of dealers at $50 upwards for round lots.

*Colocynth*, Trieste, is higher and decidedly firm at the advance; the small available supply is closely concentrated, and nothing offers below 70c., with numerous sales at this figure, and the range 70c. to 75c.

*Caffeine* continues weak and unsettled, with $6.50 quoted in most instances, though this quotation is freely shaded.

*Glycerin* remains in strong position. Crude commands the top prices recently quoted from the foreign market, and is not offered very liberally, while the distribution of refined seems unrestricted; quoted 17c. to 17½c., as to quantity.

*Menthol* has sold to some extent during the interval at a lower range, and is now generally quoted $4.25 to $4.50.

*Morphine* has advanced and is expected to go higher in view of the firmer position of opium and the expected advance in tariff duty. Under the proposed new tariff measure, as originally framed, opium remains on the free list. Morphine, which is at present dutiable at 50c. per ounce, is subject to the proposed increase of 15 per cent. Prices have advanced all along the line, and $1.50 is now generally quoted, though we hear of a few sales within the range of $1.45 to $1.50. P. & W. is held at $1.60.

*Opium* is selling fairly at the recent advance and prices are well maintained on all sides. Offers to sell are made with more freedom, however, and numerous sales of single case lots and smaller quantities are reported. Single case lots bring $2, while broken packages are held at $2.05 to $2.10, with $2.15 reached in remote instances. Prices for powdered Opium remain at $2.55 to $2.75 for ordinary and $3 to $3.10 for high grade.

*Quinine* continues inquired for to a moderate extent, but nothing of interest has developed. Foreign bulk does not offer below 26½c., and the bulk of sales are making at ½c. more. P. & W. is held firmly at 30c.

*Saffron* American, has sold fairly within the interval, and continues in fair, steady request, and firm at 35c. Among other transactions we are reported a sale of 10 bales at this figure. Valencia is held at $6.75 to $7.50 and Alicante $4.75 to $5.35, according to quality.

*Tonka Beans* remain quiet and unchanged. Angostura offers at $2.50 for prime, and Surinam and Para remain about the same as they have been for some time past.

*Vanilla Beans* are in better supply and easier, with $6 to $12 quoted for whole and $3 to $6 for cuts. Genuine Mexican brings $5.

*Wax*, Japan, is held firmly at 7¼c. to 7½c., and a firmer feeling is developing. The available supply is small and concentrated in the hands of one or two dealers. Carnauba is weak and unsettled, with 24c. to 32c. quoted, as to number.

### DYESTUFFS.

*Cutch* has developed no new feature either as regards price or demand. Bales and boxes are quoted 5c. to 5½c. and 6c. to 7½c. respectively.

*Divi Divi* continues quiet and the tone of the market is weak. We quote the range at $42.50 to $50.

*Gambier* continues to pass out into channels of consumption and a fair demand is experienced. Store goods are held at 4 3/16c. to 4¼c, as to quality and quantity.

*Indigo* remains quiet and the market is without new features; prices are firm, with a fair seasonable demand.

*Nutgalls*, blue Aleppo, are selling fairly within the range of 12c. to 13c.; a few small parcels have changed hands recently at 12½c.

*Sumac* remains inactive, sales being confined to small jobbing parcels, for which $40 to $50 is required for Virginia and Sicily.

### CHEMICALS.

*Acetate of Lime* continues dull and the tone of the market is weak, with sellers at 85c. for brown and $1.25 for gray.

*Alum* has met with freer sale and prices are firmly maintained at $1.65 to $1.75 for lump and ground respectively.

*Arsenic, White*, is well maintained and the market is firm at 4½c. The spot supply is scarce and an advance is expected.

*Blue Vitriol* is steady at prices on the basis of 4c. to 4¼c. for prime, the inside figure for carload lots. Higher prices are anticipated.

*Brimstone, Crude*, is scarce on spot and still quoted at $17 for unmixed seconds; lots to arrive at $15.37½.

*Carbolic Acid*, crystals continue in demand and firm at the recent advance; nothing now is offered below 15c. to 15½c. and 21c. to 22c. for drums and bottles respectively.

*Chlorate Potash* is steady and in somewhat better demand. German has sold in the interval at 9c. and English at 9¼c.

*Epsom Salt* has hardened a trifle in the interval and it is difficult to purchase below 1c. The advance is the result of an agreement to maintain prices between the manufacturers. The position of the salt is referred to as good and the present range of values is likely to be maintained for some time to come.

*Cream Tartar and Tartrates.*—Word is received as we go to press of an advance in *Cream Tartar* prices which affects *Tartaric Acid, Rochelle Salt* and *Seidlitz Mixture*. For *Cream Tartar* manufacturers now quote 26c. for crystals and the same for powdered, in five-cask lots. Tartaric acid is 1c. higher with crystals quoted 31c. to 31½c., and powdered 31½c. to 32c. Rochelle salt is advanced ½c.; now quoted 20½c. to 21½c. Seidlitz mixture is higher by ½c., being quoted now at 17½c. to 18c., in boxes.

*Nitrate Soda* is easier and sales exship have been at $1.72 to $1.75.

*Sugar of Lead* prices are reflecting the operation of competition between manufacturers, and the market is unsettled with white crystals quoted at 5⅝c. and brown 4¾c. to 5c., as to quantities.

### ESSENTIAL OILS.

*Cassia* continues extremely scarce with high test oil quoted up to $2.65 and low test $2.10.

*Citronella* continues to reflect a rising market. The statistical position of the article is very strong. Our quotations still hold good, though an advance on these is asked in some quarters.

*Lemon and Orange* continue in demand and firm, without, however, any quotable change in value. New Orange to arrive can be purchased at $1.75 to $1.80.

*Peppermint* continues quiet but firm. A few sales of case oil are reported at $2.15, for future delivery, though jobbers quote $2.20.

### GUMS.

*Aloes, Curacao*, continue firm and in demand with 3¼c. the inside price for round lots. Cape quoted at 6¼c. to 6½c., and Socotrine at 25c. to 32c.

*Asafœtida* continues weak and values are easy with 13c. to 16c. quoted.

*Shellac* continues weak and unsettled with prices irregular. D. C., on the spot, sells for 34c., V. S. O. 29c. and Diamond I. the same; T. N. is weak at 25c.

### ROOTS.

*Caulophyllum* has developed great scarcity and the quotations have been advanced 1c. with 3½c. now asked.

*Gentian* is held and selling fairly in a jobbing way at 4½c.

*Jalap* has sold fairly in the interval at about 17c.

*Sarsaparilla* is in better supply and sales are making at 5¼c. to 6c.

*Serpentaria, Texas*, offers at 21c. in some instances, though 24c. has been paid.

### SEEDS.

*Caraway* continues inquired for to a moderate extent and sales are making upon a basis of 6⅛c. to 6¼c.

*Celery* does not offer below 13c. and there is little doing in the article.

*Coriander* continues in moderate demand and dealers are quoting 4½c. to 5c. for unbleached.

*Mustard* has been received in fair quantity since our last, but the bulk of the receipts has found its way into channels of consumption and prices on the whole are unaffected. We quote yellow at 2¼c. to 2⅜c., and brown at 2¾c. to 2⅞c.